

by Frank Smith and others, diminishes the intellectual importance of alphabetic or typographic characters.

38. Note especially the story of the Babel of Tongues in "Enmerkar and the Lord of Aratta," Inanna's enigmatic message in "Lugalbanda," and the repartee of the debates and dialogues.

39. Bendt Alster, "Paradoxical Proverbs and Satire in Sumerian Literature," *Journal of Cuneiform Studies* 27 (1975) 201ff.; *idem*, "A Sumerian Riddle Collection," *Journal of Near Eastern Studies* 35 (1976) 263ff.; Robert D. Biggs, "Pre-Sargonic Riddles from Lagash," *Journal of Near Eastern Studies* 32 (1973) 26ff.; Miguel Civil, "The Anzu-Bird and Scribal Whimsies," *Journal of the American Oriental Society* 92 (1972) 271; *idem*, "From Enki's Headaches to Phonology," *Journal of Near Eastern Studies* 32 (1973) 57ff.; Benjamin R. Foster, "Humor and Cuneiform Literature," *Journal of the Ancient Near Eastern Society of Columbia University* 6 (1974) 69ff.; Edmund I. Gordon, *Sumerian Proverbs: Glimpses of Everyday Life in Ancient Mesopotamia* (1968).

40. Examples are given by Civil, "Anzu-Bird."

41. Ras Shamra Recension A of Har-ra = *hubullu* XX-XXII (B. Landsberger, et al., *Materials for the Sumerian Lexicon* 11 [1974] 42ff.): *bir*_x (BUR₅)-*ti* (ii 61', iii 8), *ša bi-ir-ti* (iii 2), *sā bir₅-ti* (iii 4), *sā be-ri-ti* (iii 6).

42. "The Babylonian Theodicy," Lambert, *Babylonian Wisdom Literature*, pp. 63ff. The textual organization of Sumerian proverb collections is according to the initial sign, even though the phonetic value varies.

43. E. Sollberger, "The Rulers of Lagaš," *Journal of Cuneiform Studies* 21 (1967) 279ff.; cf. the "Monkey Letter," interpreted by M. Powell as a parody of a formal business letter: "Ukubi to Mother . . . The Situation is Desperate," *Zeitschrift für Assyriologie* 68 (1978) 173.

Carol F. Justus

Visible Sentences in Cuneiform Hittite

On the premise that horizontal Hittite scribal rulings be taken seriously as punctuation, this study investigated their content and found that in fact they punctuate a structure similar to the periodic sentence in older Greek and Latin. As such they are to be compared with the oldest (alphabetic) Greek mark of punctuation, the paragraphos, which begins to be replaced in Alexandrian Greek by marks which segment the language on the basis of prosodic features, as in English. Hittite "visible sentences," moreover, signal in visual form underlying differences in language structure and cohesive basis which can be correlated with differences in word order type and changes which the genetically related Indo-European (IE) languages have undergone over a period of c. 4000 years of written attestation.

0.0 Introduction

Written English demands today for interpretation conventions of punctuation which were not imposed on Englishmen as late as Chaucer, Shakespeare, or even Noah Webster. Use of comma, period, and quotation mark, question mark, or exclamation point makes visible in writing the intonations of voice pattern which distinguish a completed assertion from a question, command, or half-finished sentence. As the linguist Charles Hockett (1958:33ff.) noted, a simple sentence like "I'm going home" has many interpretations depending on the speaker's intent. While the words, when segmented into separate units, retain their original semantic values, nonsegmental voice inflection or prosodic features create important distinctions of their own.

Most work on the Hittite writing system focuses on phonetic interpretation of the script or dating of its form. Hittite phonetic forms, however, clearly underlie both syllabic and logographic spellings. This study, then, concerns itself not so much with the signs of the script as with the auxiliary scribal marks which visually represent speaker intent and sentence structure in the language. Analysis of the structural content in units formed by horizontal scribal rulings, by contrast with that of English sentences, leads to the conclusion that the bases of cohesion marked by English periods differ from those marked by scribal rulings. The differences, moreover, correlate with systematic differences in word order patterns and rhetorical construction already noted by linguists (Greenberg 1966; Lehmann 1973, 1974; and others) and classicists (Weil, discussed by Justus 1981a).

The perspective here, while historical, is not in any sense evolutionary. Although punctuation using comma, period, and capital letters did undergo evolutionary development from its beginnings with the third century BC Alexandrian scholar, Aristophanes of Byzantium, up through recent codification in manuals of style (see below), scribal rulings on cuneiform tablets were already punctuating written

language in Hittite texts as early as the seventeenth century BC (earlier elsewhere: Green, this volume). Written language thus knew punctuation before its earliest Greek use. But Greek strategy itself changed well after the development of the alphabet. Developments in the use of comma, period, and capital letters in fact are chronologically contemporary with changes in structure in the Indo-European (IE) languages, changes as dramatic as loss of case endings on the noun, loss of verbal inflection, and shifts in basic word order patterns (Lakoff 1972), as well as shifts in rhetorical order (Justus 1981a:446-9). Change here is thus change between typologically variant systems, not development out of early origins, nor even changes correlated with the writing down of language, as the patterns of Hittite scribal ruling go back to a written tradition that precedes it by over a millennium (Powell, this volume). Assuming that the basis of modern English punctuation is established, the focus here turns to the earlier system.

First, I sketch the textual and linguistic context of the study and illustrate the problems using as example the first account of aphasia in history, a text which purports to be the King's own story of his speech loss, but which may well have had the more practical function of illustrating well-formed Hittite sentence structures.

Next I address the issue of sentence structure in language and its visible definition in Hittite writing. Crucial are criteria for identifying minimal cohesive structures and the basis of cohesion. Criteria of quite separate kinds (ruled units and quoted speech units) lead to the hypothesis that grammatical cohesion within the clause, but pragmatic cohesion between clauses, characterizes Hittite sentences. By contrast, English cohesion within the clause is based on pragmatic subject-predicate relations, but between clauses on grammatical subordination classified in terms of noun-verb relations (substantive or adverb clauses) and noun modifying relations (relative clauses). The Hittite strategy is the reverse of that in English – not a less complicated form – and repeats itself in a nonrandom way which has parallels outside Hittite.

I conclude that visible Hittite sentences elucidate a typologically different principle of cohesion in language.

1.0 Context of the Study

1.1 Cuneiform Hittite

The corpus of Hittite documents comes from the period c. 1650-1200 BC almost entirely from Hattuša in Central Anatolia, which was the capital of the Hittite kingdom throughout this era (Otten 1964:17 with note 29; CTH 267 and ix). Hittite scribes wrote a Mesopotamian type of cuneiform on clay tablets. While the oldest cuneiform tablets yet found in Hittite territory are records of Assyrian merchants from the nineteenth-eighteenth centuries BC, the Hittites ultimately adopted a Babylonian style of writing, not the Old Assyrian form of the script. Because they borrowed this script from an established literary source, it presupposed a minimal knowledge of Akkadian and some acquaintance with Sumerian (Goetze 1957:17lf.). Lexical texts (StBoT 7; CTH 47-53), Akkadian-Hittite bilinguals and trilinguals in Sumerian-Akkadian-Hittite (Cooper 1971; Justus 1981:0.4), as well as translation literature (CTH 53f.; 145-8) attest to the multilingual training of a Hittite scribe.

Texts in cuneiform Hittite include genres as diverse as laws, annals, edicts

and testaments, treaties, letters, hymns and prayers, procedural instruction, court testimony, rituals, and literary texts (CTH 1971; CTH 1972), as well as the bilinguals, lexical texts, and translations into Hittite from Akkadian such as omens (StBoT 9) and oracles (THeth 7; THeth 6) or medical texts (StBoT 19). Since scribes often signed the texts they wrote, we can often distinguish their family, period, and ethnicity (Laroche 1949).

Current philological and paleographical work is attempting to date individual tablets to periods of Hittite history, assigning them to linguistic categories Old Hittite (OH: c. 1700-1500 BC) and New Hittite (NH: with earlier and later periods, Kammenhuber 1969a passim), or to historical and paleographical periods OH (c. 1700-1500 BC), Middle Hittite (MH: cf. Košak 1980:34ff. with references; c. 1450-1380 BC), and NH (c. 1380-1200 BC: Suppiluliuma I to the destruction of Hattuša). Paleographical studies distinguish chronological periods on the basis of handwriting, isolating first an OH ductus as opposed to NH forms for writing the signs, the latter contrasting with a "relatively old" or MH script form (StBoT 20; KBo 21 introduction, nr. 15-21). Ongoing dictionary projects reflect both the linguistic division between OH and NH (HW²) and paleographic distinctions among OH, MH, and NH (CHD), while text editions illustrate linguistic characteristics by genre and period (e.g., THeth 6: NH oracle language; StBoT 8 and 12: OH rituals; StBoT 13: NH ritual). Beside lexical, grammatical, and paleographical material found in text editions and dictionaries, standard grammars (Friedrich 1960; Kammenhuber 1969:119-357; Kronasser 1956; 1966) and hand copies of texts (KUB, KBo, etc.: CTH ix) constitute essential reference tools.

1.2 Genetic Relations

Jakob Grimm (Lehmann 1967:71ff), long before the decipherment of Hittite (Gurney 1952:8ff; Ceram 1956:71ff), showed that systematic correspondences in sound between Germanic on the one hand and ancient Greek, Latin, and Sanskrit on the other reinforced the opinion of earlier scholars that these languages all sprang from an original, no longer existing protolanguage. Similarities among words for basic kinship relations like "father" (Latin and Greek *patēr*, Sanskrit *pitar-*), "mother" (Latin and Greek *mātēr*, Sanskrit *mātar-*), "brother" (Latin and Greek *frātēr*, Sanskrit *bhrātar-*), body parts like "foot" (Latin *ped-*, Greek *pod-*, Sanskrit *pad-*), numerals like "two" (Latin and Greek *duo*, Sanskrit *dva*), and "three" (Latin *trēs*, Greek *treis*, Sanskrit *trayas*), or celestial phenomena like "sky, cloud" (Latin *nebula*, Greek *nephelos* "cloud," Sanskrit *nabh-*) are thus not coincidental (Lehmann 1973:21ff). Hittite scholars like Bédřich Hrozný, Holger Pedersen, and Edgar Sturtevant were quick then to order Hittite *pedan* "place" and *nepiš-* "sky, heaven" among other forms which showed that Hittite was systematically related to the other older IE languages. As a result, IE etymological dictionaries like Buck (1949) and Pokorny (1959) now include Hittite forms beside those of the other IE languages.

More recently, comparison of the cultural system which results from linguistic reconstruction of terms like those for "horse," "vehicle," and "bronze," combined with prehistoric archaeology, suggests that the Proto-IE homeland once stretched across the river valleys north of the Black Sea, the Caucasus Mountains, and the Caspian Sea c. 3400-2500 BC or earlier (Gimbutas 1974; 1977). Among earliest migrations out of the homeland was that of the Hittites, whose kings ruled the Hatti

land and whose scribal school produced texts c. 1650-1200 BC, texts which include Indo-Iranian personal names in treaties and technical terms in horse training texts of the fourteenth century BC, texts all written in Hittite (Kammenhuber 1961). Unlike their Mycenaean Greek cousins who left administrative texts in quite another script (Linear B) on Crete and mainland Greece (c. 1450-1250 BC: Chadwick 1967), the Indo-Iranians are next heard from in the oral religious tradition of the Vedas, which were not written down before c. 600 BC (Macdonell 1916:2; Burrow 1973:3).

Of the languages preserved in texts from the Hittite capital, two (Hattic and Sumerian) are genetically unrelated to any well-studied family, despite attempts to relate Sumerian to Chinese, Hungarian, and IE. A third, Hurrian, has certain affinities with eighth century BC Urartian (Laroche 1978:14f.). Despite the literary prestige of Semitic Akkadian, it is the IE language family which is the most securely represented. Hittite and its sister languages Palaic (Kammenhuber 1959; 1969; StBoT 10) and Luwian (with hieroglyphic Luwian continuing in the South after the destruction of Hattuša until the eighth century BC: Hawkins et al. 1973:146), together with the later Lydian (7th-4th centuries BC: Gusmani 1964:17-9, but Heubeck 1969:358f.), constitute the Anatolian branch of the family (Kronasser 1956:12ff.; Kammenhuber 1969:119ff.), recording events in Anatolia from c. 1700 BC to the Hellenistic period.

1.3 Typological Relations

Morphologically, Hittite is synthetic, using inflectional endings on nouns and verbs to express grammatical relations which English expresses with word order or prepositions. As in older IE generally, roots are fused with the suffix obscuring the boundary between the two. English archaic forms like "deep:depth" and "high:height" retain relics of the older pattern beside newer "deep:deepness" (Sapir 1949 [1921]:129ff.). Hittite word order patterns of the second millennium BC are fundamentally different from those of the modern western IE languages. The basic Hittite "sentence" has subject, object, verb order (verb final order) as opposed to the subject, verb, object order of English (verb initial: Lehmann 1976a:5ff.; 15ff.; 1973:46ff.). Other patterns, despite certain inconsistencies that increase in time in IE (Lehmann 1974; Justus 1980), bear out the implicational relations of having the object precede the verb (Greenberg 1966). For example, Hittite has postpositions instead of prepositions, the infinitive and other nonfinite verbals precede the main verb (cf. 6, 6 and 11, 3 below), and the standard precedes the adjective in the comparison of inequality ("John-from tall" not "taller than John"; Justus 1981:8.2).

Genetically unrelated Anatolian neighbors of Hittite vary widely in type from Hurrian with verb final order (Bush 1964 with references) to Hattic with preverbal negation and other preverbal modifiers (Kammenhuber 1969b:503ff.; 532; 542f.) as well as prefixes for case and possessive pronouns (*ibid.*, 468ff.; 534f.), clearly not verb final characteristics. Mesopotamian literary languages show modified verb final patterns—Sumerian more so than Akkadian—while political powers in Egypt and Canaan with whom the Hittites corresponded had verb initial languages (Gardiner 1957:34, 412ff.; Justus ms.). Within IE, Indic languages like Bengali and Hindi, in contact with verb final Dravidian languages in India, have retained much of the verb final character of the proto-language,² while Irish has become verb initial (Schmidt 1980:188ff.; Greene 1977:21ff.), similar in word order to Old Egyptian (cf. above) and Easter Island (Justus 1980:190f. with references). Verb final languages in Anatolia are

unlikely to be responsible for Hittite word order, as the Anatolian substratum, with Hattic case prefixing and with verb final Hurrian, included both verb initial and verb final models. That other IE languages retain similar relics points to a genetic explanation for verb final Hittite patterns (Lehmann 1974).

1.4 The Script

The Hittite adaptation of Mesopotamian cuneiform uses signs that are unambiguously linear, left to right, based on an Old Babylonian form of the script (Friedrich 1960:21-5; Kammenhuber 1969:161ff.; Kronasser 1966:3ff.; Jucquois 1972:62ff.). Consequently, the case division of Old Sumerian texts (Green, this volume) has given way to regularized vertical rulings to separate columns on the tablet, with horizontal rulings to indicate divisions in content within the column. Genres of texts, with the exception perhaps of lexical texts, are not visually distinct but usually distinguished by text introduction. Cuneiform signs represented, however imperfectly, the phonetic speech of the Hittite scribe, with signs used in the three ways conventionally termed logographic, syllabographic, and determinative (Gelb 1963:99ff.; 105ff.; Güterbock 1951:141ff.).

Logograms stand for entire words (a single sign for *šiu-naš* "of (the) god" e.g.); syllabograms spell words phonetically, syllable by syllable (e.g., *ši-u-na-aš*), or in combination with logograms often analyze root and grammatical ending (e.g., single sign for base root *šiu(n)-*, plus a sign *-aš* as phonetic complement for the genitive case of the word). Logograms in Hittite texts are of two kinds, those transliterated with capital letters for the Sumerian phonetic value (e.g., DINGIR "god") and those transliterated with italicized capitals to represent Akkadian phonetic sequences (Figure 1). Transcriptions of the basic "god" sign as Sumerian DINGIR, Akkadian *I-LU-UM* (nominative singular as opposed to genitive and accusative), but underlying *šiuš* (StBoT 18, 122ff.: nominative singular among other possibilities; cf. Figure 1, 1) are conventions of modern scholarship which reflect scribal use of the three literary languages. The educated scribe exploited his trilingual knowledge as ingeniously as alphabetic use does numeral signs (1, 2, 3) which have underlying phonetic forms "one, two, three" in an English text, "un, deux, trois" in French, but

Figure 1. Logograms

Sign	Sumerian <i>phonetic value</i>	Akkadian <i>phonetic value</i>	Hittite <i>phonetic value</i>	Meaning
1. 	dingir	<i>ilu(m)</i> <i>ila(m)</i> <i>ili(m)</i>	<i>šiuš</i> <i>šiu(nan)</i> <i>šiu-naš</i>	"god" (nom.) "god" (acc.) "god" (gen.)
2. 	an	<i>šamû</i> <i>šamê</i>	<i>nepiš</i> <i>nepišaš</i>	"heaven" (nom.) "heaven" (gen.)
3. 	ud	<i>ûmu(m)</i>	<i>šiwatt-</i>	"day" (root)

"eins, zwei, drei" in a German text, or the form "2nd" with phonetic complement -nd to indicate that "2" stands for phonetic "second," not "two". The parallel is not exact, but in the context of borrowed Latin forms like *et cetera*, it comes close to principles behind Hittite adaptation of cuneiform. However the scribe chose to "spell" (e.g., *I-LI-IM* or *I-LIM*, even *DINGIR-LIM* for *šiu-naš*), his writing stood for underlying Hittite phonetic forms, whether modern scholars know what the form is or not. Writings like *DINGIR-LIM-aš* (cf. Figure 2) with both Akkadian and Hittite phonetic complements confirm the fact that genitive *šiu-naš* is meant. Multiple copies of the same text, moreover, make the equivalence conclusive.

A complication of the system stems from the use of the same logogram for more than one phonetic value. The Sumerians, for example, could read the "god" sign as AN (Figure 1) to mean "heaven, sky," a use which the Akkadians and Hittites took over using it for Akkadian *ŠAMU* "heavens" or *ŠAMÉ* "of the heavens," Hittite *nepišaš* (NH genitive singular or plural: Friedrich 1960:57).

It is the distribution of the sign with other signs which disambiguates its function as logogram, syllabogram, or determinative. Determinatives, placed before nouns, signal noun class (Powell, this volume). The single vertical wedge precedes a male proper name, URU city names, and *DINGIR* names of deities, both male and female. As logogram, the "day" sign (Figure 1) has Sumerian reading UD, Hittite *šiwatt-* (root without case ending). Preceded by the "god" sign, the "day" sign is read UTU in Sumerian, Akkadian *ŠAMAŠ*, or with phonetic complement -uš, Hittite-Hattic *lštanuš* (Figure 2) referring to the male Sungod (Laroche 1947:25).³ With Akkadographic complement -šI (Figures 2 and 3), the sequence "god" plus "day" refers to a specific use of "Sungod" as royal title: Akkadographic *ŠAMŠI*, translated with varying degrees of idiomacity as "the (divine) Sun" or "his Majesty," to be compared with the Egyptian Pharaoh who was descended from the Sungod Re, a title which Louis XIV *le roi soleil* immortalized in modern times.

Besides logographic and determinative use, the same sign, with different distribution was used syllabically. The syllabic value of the "god" sign was -an as in *uruHa-at-tu-ša-an* (Figure 2). To the degree that determinatives (as auxiliary marks) facilitate phonetic interpretation of the context as a whole (Gelb 1963:103 passim),

Figure 2. Sign Distribution

Sign Sequence	Sign Trans-literation	Hittite Trans-cription	Interpretation
1.	^d UTU-uš	lštanuš	^{god} SUN-nominative
2.	^d UTU-šI		^{god} SUN-MY
3.	DINGIR-LIM-aš	šiu-naš	"of [the] god"
4.	^{uru} Ha-at-tu-ša-an	Hattušan	Hattuša-accusative

they might be compared with English capitalization of proper nouns and German capitalization of all nouns. Besides determinatives, the *Glossenkeil*, one or two tilted wedges written before a foreign word or technical term (Goetze 1957:5 with note; StBoT 4, 16; 79; HW 330-4), was another auxiliary mark. One might compare use of italics or quotation marks with single words in English.

While Hittite scribes borrowed many distributional patterns along with the phonetic values for signs, the Hurrian-initiated convention known as Sturtevant's Rule is new. Sturtevant argued that Hittite scribes disregarded the Babylonian voicing rules for syllabic signs containing the consonants p/b, t/d, k/g and used single spelling of the bilabial stop /p/ in *ne-pí-ša-aš* "of heaven" for voiced /b/ (cf. comparative IE forms, Latin *nebula* "cloud," Sanskrit *nabh-*), but double spelling as in *a-ap-pa* "after" for voiceless /p/ (cf. Jucquois 1972:86-125 with references). English spelling, too, is often conventional as when final -e after a single consonant indicates preceding "long" (diphthongized) vowel as opposed to a short, undiphthongized one ("mite:mit, site:sit, bite:bit, hope:hop, note:not").

1.5 Tablet Space and Script

As elsewhere from the second millennium on, the cuneiform Hittite scribe might use vertical lines to separate the left hand column from the one or more columns to the right on the front of the tablet, but because of the peculiarly cuneiform convention for turning the writing surface over (Powell, this volume), the columns of the back were ordered from right to left. Typical is the NH text which tells of the aphasia of one of the greatest royal heroes, Muršili II (c. 1339-1306), and the ritual prescribed for it (Figure 3). The tablet (KBo IV 2) contains two texts. One, the ritual of Huwarlu involving birds, takes up the front and first 39 lines of the first column on the back, Rs. III, the column on the right. Both vertical and horizontal rulings segment the tablet. Double verticals separate the last column, Rs. IV on the left, from Rs. III, while double horizontals with wedged left ends mark the boundary between the preceding ritual and the Aphasia text (Rs. III 39-40). Signs from the fifth ruled unit of the Aphasia text (back left) have spilled over into the space between columnar rulings which separate it from the beginning of the text in Rs. III (cf. -an of *GIMan* and -ya of *keldiya*).⁴

Signs depend for clarity on the smoothness and state of preservation of the clay surface. In Figure 4 the angle of the shadow is crucial, because of the three dimensional character of the script (cf. Powell, this volume). Clearly visible here under the double ruling before Rs. III 40 are signs *UM-MA*, determinative (god), logographic UTU with Akkadographic -šI, determinative (male name), and *mur* of Muršili⁵ (Figure 5).

Like first lines of texts elsewhere in Hittite, *UMMA ŠAMŠI* "Muršili LUGAL.GAL "Thus (speaks) the Sun, Muršili, the Great King" is a formula for introducing the text as the quoted speech of the King, a style borrowed with the script. Prototypical is the address in a letter like that found at Alalah (nr. 125, lines 1-2: Rost 1956:340ff.): *UMMA LUGAL-MA ANA* "Pirwannu *QIBI-MA* "Thus [speaks] the King: say [as follows] to Pirwannu."

Hittite scribes sometimes find it convenient to maintain the cuneiform equivalence, one line equals one clause (cf. Green, this volume; in Hittite StBoT 13, I 9-11; Aphasia KBo IV 2 III 49; IV 37; IV 40; IV 41), but the rule is to abandon it.

Güterbock's (1951:141ff.) comparison of the Song of Ullikummi line/verse units with Ugaritic texts exemplifies the Hittite scribe's deviation from cuneiform tradition in use of line space. One might further compare the Hittite version of Ullikummi with Homeric grammatical clause distribution over the dactylic hexameter as line unit. It may well be the IE character of Hittite that makes it depart from cuneiform tradition on this point.

Tablet rulings from cuneiform tradition, however, persist in Hittite use. While horizontal rulings vary—double to divide texts on the same tablet, often to divide the colophon from the text,⁶ or larger thought units within a text (KUB XIII StBoT 4: court testimony)—suffice it here to isolate single horizontal ruled breaks in the text. Such breaks constitute the primary visual data relating to questions of punctuation and grammatical structure. Older editions (Friedrich's treaties, Goetze's annals, Tunnawi ritual, plague prayers, and Hattušili *Apology*) recognized the linguistic reality of the scribal ruling, assigning each ruled unit a paragraph number in the text edition, although one of the difficulties in editing the Laws stems from the occasional lack of scribal agreement among the many extant copies as to where the ruling should fall.

Figure 3. Scribal Rulings on Back of KBo IV 2⁴

IV		III
(41)	-an-zi	(38)
(42)	-1]a-az	(previous text: Huwarlu ritual)
(43)	-ul-ši GIM -an	(39)
(44)	ki-el-di -ya	(40) UM-MA dUTU-ŠI mMur-ši-li LUGAL.GAL I-NA
(45)	-ya-an	uruTil-Ku (-un-nu)
(46)	-ri-iš- ma	(41) na-an-na-ah-hu-un nu har-ši-har-ši ú-da-aš...
		(42) [t]e-it-hi-iš-ki-it nu na-a-hu-un nu-mu-kán
		me-mi-aš...
		(43) te-pa-u-e-eš-ta...

Text transcription of KBo IV 2 III 40ff. with glossed translation:

(40)	UMMA	dŠAMŠI	mMuršili	LUGAL.GAL	INA	uruTil-Kunnu
	thus	Sun King	mMuršili	King-great	to	Til-Kunnu
(41)	nannahhun	nu	haršiharši	udaš	namma	dU-aš hatuga
	I-marched	ptc	bad-storm	brought	further	Stormgod terribly
(42)	tethiškit	nu	nahun	nu-mu-kán	memiaš	išši anda
	kept-thundering	ptc	I-feared	ptc-me-ptc	speech	mouth in
(43)	tepawešta	...				
	small-became	...				

"Thus [speaks] the Sun [my Majesty] Muršili, the Great King: '[As] I marched to Til-Kunnu, there came a terrible storm [a *haršiharši*]; the Stormgod further kept thundering, [so] I feared, [so that] the speech in my mouth became small.'"

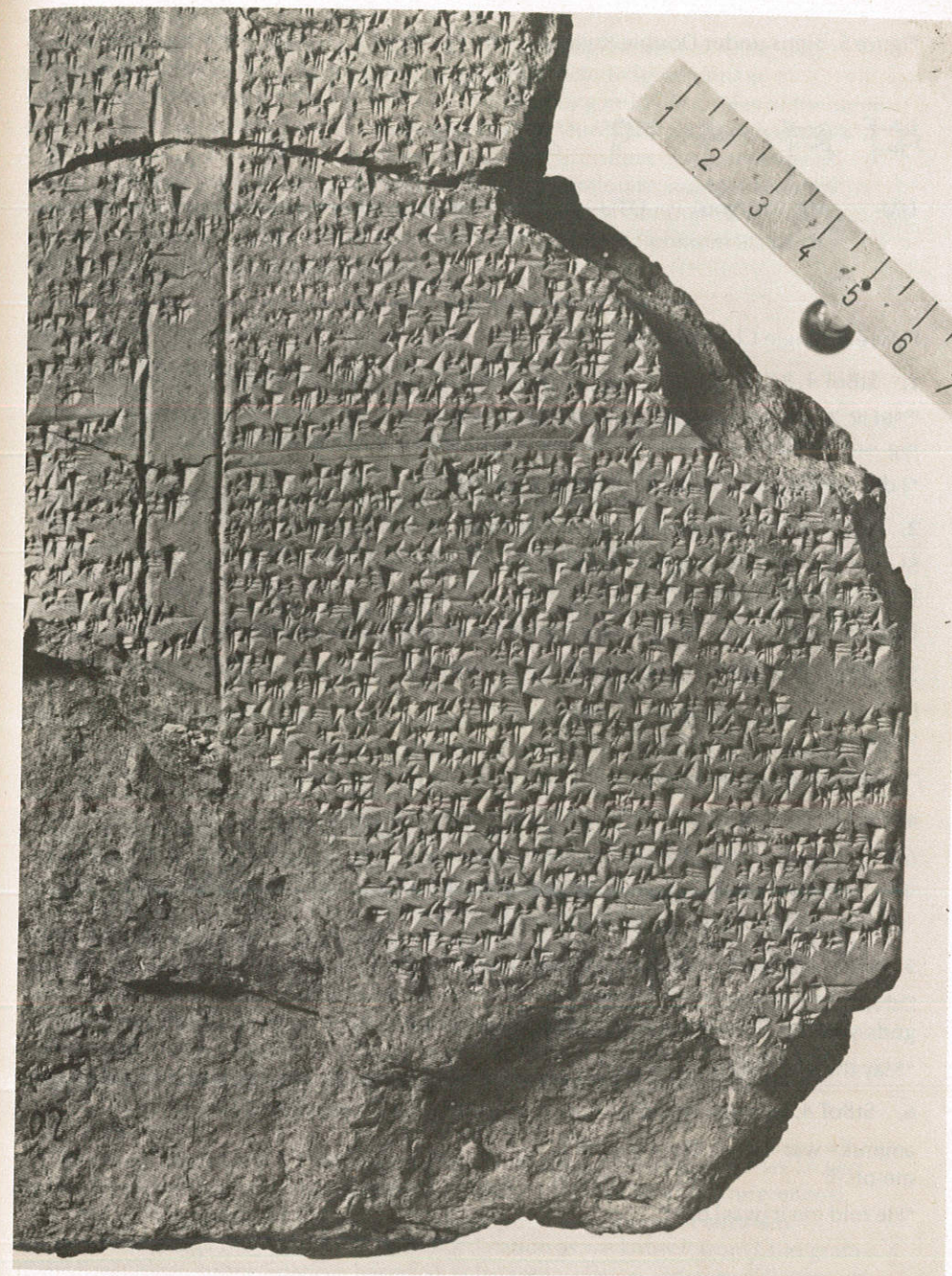


Figure 4. Photograph of KBo IV 2 III 40ff.⁵

Figure 5. Signs under Double Ruling



Figure 6. Single Clause Units

1. StBoT 4, 8 KUB XIII 35 + II 38: Transitive verb with direct object

^{dug}BUR.ZI ^{na}4KÁ.DINGIR.RA=wa=za UL dahhun
jug Babylonian-stone-ptc-ptc not I-took
"I did not take the jug made of Babylonian stone."

2. StBoT 1, 22 II 6: Transitive verb with direct and oblique object

ŠU.NIGIN 23 SAG.DU^{mes} KASKAL ^{uru}Zikeššara ^{ma}mušen^{en}Ziti uppešta
total 23 persons campaign Zikeššara Eagleman sent-3s
Eagleman sent a total of 23 persons from the campaign against Zikeššara."

3. StBoT 4, 10 III 38 (court testimony): nominal sentence with predicate adj.

[^mK]ukkuš=ma ^{la}šalašhaš arahza
Kukku-ptc šalašha-man absent
"Kukku, the šalašha, [was] absent."

4. TH 6, 98 (KUB XXII 70 Rs. 65 oracle text: nominal sentence)

(nu memai) DINGIR-LUM GEMEiš=wa=tta
(ptc speaks) god servant-ptc-you
"[She speaks]: 'O god, [I am] your servant!'"

5. Otten (1956) 182 VAT 13 047 (letter), line 5

DINGIR^{mes}=(š)maš TI-an harkandu
gods-you alive may-they-hold
"May the gods keep you alive."

6. StBoT 4, 10f. KUB XIII 35 III 17 (court testimony): object complement

ammuk=war=an akkantan IQBI
me-ptc-it dead he-said
"He told me it [was] dead."

Güterbock (1980:42) likewise notes the lack of scribal agreement in ruling the different versions of the prayer to the Sungod. But such disagreement is overshadowed by more than random agreement among multiple copies of the same text. Of particular interest are the two copies of the Muwattalli ritual-prayer (KUB VI 45 and 46) which show scribal notations that appear to correct disagreements in ruling.⁷ Without some independent attestation from antiquity, modern scholars could not hope to define Hittite syntactic units as linguists can English sentences. The ruling, however vague a clue, is our link with second millennium BC speaker intuition, and should not be disdained.

2.0 Hittite "Sentences"

2.1 Scribal Division and Language Structure

Two essential questions converge in the analysis of the ruling as auxiliary sign in the writing system. While it is the scribal ruling at which the study is directed, the linguistic structure of the content within the ruled unit is presumably the *raison d'être* for the ruling. Auxiliary mark and its linguistic basis are thus two sides of the same question. Diringer's (1948:191; 231; 284; 439) study of the alphabet describes punctuation as word division marking. Some scripts use dots or vertical marks to indicate word boundaries. Gelb (1963:14f.; 99; 113 passim), in discussing sign types, rightly suggests that pauses separating words mark prosodic features of intonation and pause and as such are phonetic. Hittite, much like early Greek which even omitted any sign of word division (Thompson 1966:67ff.), lacks any mark associated with the prosodic correlates of grammatical structure (Allen 1973:4f.; 18ff.; 20ff.). Without such phonetic correlates as comma and period, how did one then recognize syntactic divisions such as clause and sentence? The suggestion here is that symbols for text interpretation vary just as linguistic structures do. The English period punctuates one kind of structure, the Hittite ruling another.

For clausal boundary, early IE language structure places particles at the beginning, the verb often at the end essentially "punctuating" the clause. Hittite initial particle *nu* and the regularly clause final verb are characteristic. In Figure 3 (line 41) the clause *nu haršiharši udaš* "there came a *haršiharši*" with initial *nu* and final verb *udaš* varies with clause types where enclitics like pronominal *-mu-* or directional particle *-kan* (cf. *nu-mu-kan memiaš išši anda tepawešta* "the speech in my mouth became small" [Figure 3, line 42f.]; cf. also middle-reflexive enclitic *-za* and quotative *-wa(r)-* [Figure 6]) follow *nu* or some other initial form. Parallels in older IE Greek, Latin, and Sanskrit are well known in Wackernagel's famous "Law" on enclitic position of particles and pronominals. Watkins (1963) has compared it at length with Old Irish and Hittite, sifting out its true IE character from more general language phenomena (1964).

Clauses so punctuated by linguistic form appear strung together as if they lacked a fully developed basis of cohesion (Goetze 1957:58; Justus 1979 with references). This intuitive impression is based on the assumption that cohesion between clauses in language must be based on subordination as we know it from Latin grammatical tradition, subordination based on substantive clauses, adverbial clauses, or relative clauses (see any grammar). Such subordination is based on grammatical relationships determined by a particular noun relation to the verb (subject, direct

object, oblique adverbial objects expressing time, place, purpose), or by the modifying relation to another noun (adjectival relative).

Likewise intuitive are traditional categories, subject and basic sentence, which presuppose pragmatic subject-predicate cohesion in the single clause and grammatical cohesion between clauses. Keenan's (1976:307ff.) logical definition is an attempt to formulate an explicit definition of sentences in general. I excerpt: "A syntactic structure *x* is *semantically more basic* than a syntactic structure *y* if, and only if, the meaning of *y* depends on that of *x*. That is, to understand the meaning of *y* it is necessary to understand the meaning of *x*." In Hittite, clausal sequences begin with a topic clause and end with a final main statement, each of which depends on the other for its proper meaning (Justus 1976:222ff.). Because scribal rulings which bound such structures agree nonrandomly when multiple copies of the same text are preserved, one must conclude that they reflect divisions based on an intuitive knowledge of cohesion which escapes us today.

The Aphasia text, a text of perhaps some 75 clauses, has only six ruled units. If cohesion is based on grammatical relations between clauses, as many as the five clauses of the shorter ruled units make an awkward sentence outside our archaic legal language. The longer rulings are even clumsier. One has the option thus of assuming, with traditional IE scholars, that subordination as the basis of cohesion is still incomplete in the early texts. Or, one might make the abductive leap and suppose that a different basis of cohesion lies behind the scribe's intuition. Similarities between units of scribal ruling and the older Greek and Latin periodic sentence (see below) in fact suggest that Hittite should be taken seriously on its own terms.

The analysis here suggests – on the basis of data from minimal units of scribal ruling which parallel minimal quoted speech units – that Hittite reverses grammatical and pragmatic bases of cohesion. Both paratactic clause (Figure 7:3) and nonfinite verbal (Figure 6:6) express basic object complementation, a traditional grammatical function (Justus 1979:93f.; 98ff.). But in Hittite the separate (paratactic) object clause has a distinctively pragmatic function, its grammatical one being redundant by contrast with the distinctively grammatical object clause of English. Analysis of scribal rulings as visible expression of the Hittite "sentence" explores this other, equally complex, distribution of cohesion within the single clause and between separate clauses.

2.2 Content of Horizontal Scribal Rulings and Quotations.

2.2.1. Single Clause Units.

The minimal scribal ruling contains a single clause (or ellipsis for it), and is paralleled by quoted single clauses of similar structure. While the scribal ruling after the construction is predictable, no single formal feature obligatorily isolates quoted speech units. The enclitic particle *-wa(r)-* is frequent (Figure 6:4; Friedrich 1960:148-50), but perhaps lost or regularized in some places (cf. StBoT 4, 77-9 for discussion of the spoken form). Written convention introduces the text itself as quoted speech using Akkadographic *UMMA* "thus" for Hittite *kiššan* "as follows" (cf. the Aphasia text, spoken, according to the introduction, by Muršili: Figure 3, line 40), but subparts of the text may also be introduced this way, or by verbs of

communication like *IQBI/memai* "[he] said/says" replacing *UMMA/kiššan* (Figure 6:4). English verbs of communication may begin or end quoted speech, but in Hittite they usually begin it (cf. note 7) with a summary of the effect of the speech (Figure 11:2) at the end. Archaic in English is the Hittite use of "thus" instead of the verb of communication to introduce the speech.

In both ruled unit and quoted speech, cohesion is based on semantic properties of the final verb which govern noun relations (noun-verb cohesion) in verbal sentences, or on noun-noun relations of modification and apposition in nominal sentences. Pragmatic subject-predicate cohesion is secondary. In Figure 6:1, a ruled unit, transitive verb *dahhun* "[I] took" governs direct object ("jug of Babylonian stone") and agent relation ("I" expressed in the verbal inflection). Similarly, Figure 6:2, also a ruled unit, has final transitive *uppešta* "[he] sent" governing agent ("Eagleman"), direct object ("a total of 23 persons"), and oblique object ("from the campaign against Zikeššara"). Here logograms, undifferentiated by case marking, depend on the meaning of the verb for grammatical interpretation in a case grammar sense (cf. Fillmore 1968:21ff.).

Since Hittite nouns do inflect for case, including the nominative "subject" case, often with verb agreement, one might argue that cohesion is subject-predicate as in English. But with *uppešta* (Figure 6:2) the fact that the verb governs a human agent, a direct object, and an oblique relation for direction disambiguates relations among nouns in the clause. Cohesion based on inner semantic government is typical of older Indo-European generally, in fact (Lehmann 1974:39ff.). Single quoted clauses from an oracle text (TH 6, 64: KUB XXII 70 Vs. 38) and from court testimony (StBoT 4, 10f.: KUB XIII 35+ III 9-10) parallel the ruled clauses. The court testimony, governed by *pešta* "gave" (not cited here), a verb which governs two human animate nouns, illustrates use of case to clarify verbal government. Interestingly, to specify the relations of the two animates to the verb the scribe uses Akkadographic *ANA* for the oblique case (Friedrich 1960:179f.). It is the *ANA*, not verb agreement for the second person "subject," which clarifies the relation. In form *pešta* may be either second or third person.

The nominal sentence (Figure 6:3) illustrates cohesion based on nominal modification. In the ruled unit here an adjectival form modifies the "subject" where "subject" case is explicit in the scribe's phonetic spelling, but it need not be (cf. StBoT 1, 30 III 10-1 not cited here). Similarly, cohesion in the quoted speech from an oracle text (Figure 6:4) is based on a noun-noun relation, here apposition: "O god, [I am] your servant," where the pragmatic context (first person addresses second) is clarified by enclitic second person pronominal *-tta* "your." English expects an overt first person subject, but possessive second person equally implies the first-second person speech act context.

Besides sentences based on verbal government or on noun-noun grammatical relations, sentences may combine both grammatical bases of cohesion (Figure 6:5). Final verb *harkandu* "let them hold" in a ruled unit governs both agent "gods" and object "you alive" where cohesion within the object phrase is based on the modifying relation of the nominal sentence. Likewise quoted speeches can be built on both verbal government and modification (Figure 6:6). Here final verb *IQBI* "he said" governs agent "he," dative "me," and object phrase "it dead" in which cohesion is based on modification of "it (-an)" by participle *akkantan* "dead."

Figure 7. Minimal Multiclause Units

1. StBoT 13, 8 III 21-3 (NH ritual); cf. also *ibid.* 4f. Vs. II 20-2

GA.KIN.AG=ya arha paršan
cheese-and up breaking
nu=ššan GA.KIN.AG tepu LĀL memall=a šer šuhhai
ptc-ptc cheese some honey meal-and over shakes-3s

"Cheese being broken up, he shakes some honey and meal thereover."

2. AM 124f. KBo IV 4 Rs. III 24-5 (NH king's annals)

MU.KAMza=wa=ta šer tepawēššanza
year-ptc-you over small-becoming
nu=wa BELI=NI INA ^{uru}Hayaša le paši
ptc-ptc lord-our to Hayaša let-not you-go

"The year [is] getting short, [so] do not, our Lord, go to Hayaša."

3. Gurney 1940: 30f. C II 49-53 (NH prayer)

kinuna arahzenanteš [udniant]eš humanteš KUR ^{uru}KUBABBAR-ti
now neighboring lands all land Hatti
[w]alhaneškiuwan dair
attacking-supine they-set-3p
n=at ANA ^dUTU ^{uru}Arinna kattawatar namma kišaru
ptc-it to Sungoddess Arinna grievance again let-it-become
nu=za DINGIR-LUM tuel ŠUM-KA le tepšanuši
ptc-ptc god of-you name-your let-not you-humiliate-2s

"Let it become a matter of vengeance for you, Sungoddess of Arinna, again, [that] all the neighboring [land]s have now begun to attack the Hatti land, [so that] you do not humiliate your divine name."

Distinctively governed participial phrases (Figure 6:5-6) contrast with distinctively pragmatic participles (Figure 7:1-2).

Facts from study of Hittite *šak(k)*-/*šek(k)*- "know" (Justus 1981:9.0-9.4) further support analysis of cohesion as distinctively based on grammatical relations of government, modification, and apposition by contrast with the pragmatic subject-predicate cohesion which is distinctive in English, but redundant in Hittite. First, "subject" with Hittite "know" is not necessarily identified by nominative case. It may be written logographically (Figure 6:2), or it may take an oblique case form as first person pronominal. Second, while "subject" usually triggers agreement in number with the verb, agreement in person is not predictable (*ibid.*, 9.1). Characteristic in fact of Hittite agreement in general is its irregularity (Friedrich 1960:115ff.). Finally, it is the object relation which is invariant and obligatory. Fillmore's well known examples "John broke the vase" and "The vase broke" really show how the subject slot, while semantically variable, is always filled in English. One might compare Hittite particle -za which increases the number of nouns "know" can govern, and

4. KUB XXI 27 Rs. III 43'-47' (NH prayer)

^dZintuhiš GAŠAN=JA ŠA ^dIŠKUR ^dUTU ^{uru}TÚL-na=ya aššiyanza
Zintuhi lady-my of Stormgod Sungoddess Arinna-and favorite
haššaš ANA ^dIŠKUR=za Ū ANA ^dUTU ^{uru}TÚL-na
granddaughter to Stormgod-ptc and to Sungoddess Arinna
^{uzu}GAB-aš TUDITTUM
of-breast ornament

nu=ddu=za lammar lammar katta uškanzi
ptc-you-ptc hourly hourly down look-3p

"They notice you hourly, Zintuhi, my lady, favorite granddaughter of the Stormgod and Sungoddess of Arinna, they [whose] breast ornament [you are]."

5. Gurney 1940:16 I 3-6 (NH prayer; ruled unit as well as speech unit)

^dTelipinuš šarkuš nakkiš DINGIRuš zik
Telipinu great mighty god you
uiyat=mu ^mMuršili LUGALuš tuel ĪR=KA SAL.LUGALašš=a tuel
sent-me Muršili king of-you slave-your queen-and of-you
GEME=KA uieir it=wa ^dTelipinun
slave-your sent-3p go-ptc Telipinu
anzel EN=NI DINGIR=LAM ŠA SAG.DU=NI mugai
of-us lord-our god of person-our entreat-2s-imper

"Telipinu, you [are] a great and mighty god, [so] Muršili, the King your servant, and the Queen your maidservant sent me [to say]: 'Go entreat Telipinu, our Lord and our personal god.'"

at the same time effects a semantic change in the "subject" from base meaning (dative/experiencer: the one who experiences rather than instigates the verbal action; "The King knows him") to derived agentive ("The King acknowledges him as heir"). But -za primarily effects changes in verb semantics which secondarily result in changes in subject relation. Verbal government is thus distinctive, pragmatic subject relations redundant.

2.2.2 Minimal Multiclause Units

In a set of two or more clauses, a last Final statement predicates something about an initial Theme clause. The Theme clause, as topic, is not necessarily governed by the Final verb, but it may be (see below). In fact particular grammatical relations like purpose/result subordination, object complementation, and relativization redundantly emerge, depending on the nature of redundant government between a Final verb and a preceding Theme. Characteristic is Figure 7:1, a structure with

similarities to both the colloquial English "You know [how/when] they break the cheese, well then they sprinkle honey and meal on it" and older IE absolute constructions like "Having broken the cheese, they . . ." But the Hittite construction occupies a unique position in its own system. By contrast with the governed participial objects (Figure 6:5-6), this two clause ruled unit preposes its participial phrase as Theme clause (Figure 7:1). Theme clause "cheese being broken up" states what the construction is about, while the Final clause "he shakes some honey and meal thereover" predicates the essential ritual act performed on the cheese. The distinctive basis of cohesion is thus pragmatic, not grammatical. The translation here deliberately emphasizes the literal form to show this, although a more idiomatic translation like "He shakes honey and meal over the cheese [once it is] broken" would be truer to the English basis of cohesion.

Besides the distinctive basis of cohesion, topicality, one also perceives the redundant grammatical relation between Final verb "shakes" and Theme "broken cheese": "he shakes meal . . . over [the cheese]" where "shakes" obliquely governs "cheese." Often, as here, temporal relations are derived from contexts where oblique government is redundant. By contrast, redundant direct government relations evoke derived relative and object complementation, while ungoverned relations are the source of purpose/result readings. Characteristic of such derivation of purpose/result is Figure 7:2, a minimal quoted speech unit. By contrast with the obliquely governed Theme in Figure 7:1, this one is a simple Theme-Final construction, again with participial Theme verb, but Final verb *paiši* "do [not] go" has no governing relation to the Theme whatsoever. As a result, the corresponding English construction is best construed as grammatical cause-result cohesion: "The year [is] becoming small/short, [so] . . ." Hittite otherwise has no means to express purpose between clauses (Friedrich 1960:163).

Questions of pragmatics and topicality in language only begin to be sorted out. Li and Thompson (1976) separated subjects from topics, noting among other things that topics have no necessary grammatical relation to the verb as subjects do. Given a sentence "Elephants, their trunks are long," "elephants" is topic, "trunks" is subject. Topics must also be definite and known or presupposed, either because they are generic (cf. "elephants"), because they refer (anaphorically) to some known entity, or because of some obvious relation to something already known (cf. "trunks" to "elephants"). Theme clauses in Figure 7:1-2, in fact, have no necessary grammatical relation to a governing constituent, and in the discourse they represent the maximally presupposed information of the message. The Hittite topic/themes differ only in that they are entire clausal constituents, not single nouns in a clause.

Scholars disagree in fact as to whether syntax or discourse is primary in language (Givón 1979:207ff.). Factors of discourse presupposition like topicality (Givón 1979:50ff.) form the basis of cohesion between Hittite clauses, but the Hittite data here would not argue with Givón (1979:208ff.) that pragmatic structures evolve into a more tightly cohesive grammatical structure. Instead they argue for a reversal of pragmatic and grammatical bases of cohesion, both strategies equally as "grammaticalized," for it is grammatical cohesion that binds the Hittite clause (see above). Pragmatic cohesive bases between clauses too are as structured and regular as English subject-predicate.

Beyond known, independent topics, Chafe (1976:30ff.) pointed to topics which result from speaker emphasis or contrast, noting that English "focus of contrast" is given information, like other topics. Kuno, separating out "theme" ("what the sentence is about," a kind of information that is, not only known, but which also receives the speaker's empathy: 1976:420ff.; 427ff.) from "focus" (topical, but not the speaker's focus of empathy), established a hierarchy of topicality. Hittite confirms the need for such a hierarchy, although distinctions still need study. Hittite Theme corresponds so far to Kuno's "theme," to Li and Thompson's known "topic," but probably excludes "focus of contrast," despite problems. Hittite Focus introduces new information which is to dominate two or more clauses beside the known Theme (Justus 1976:235f.), but is not necessarily contrastive, and probably not the focus of empathy.

Analysis here adds to semantic criteria of presupposition also structural criteria for distinguishing between Theme and Focus. Both turn out, as sub-Themes, to elaborate part of a Theme or part of a Final. The Theme-Final as a unit serves as frame for such elaboration of detail, regularly defining it as medial. Medial elaboration may then give further detail about the Theme or about the Final. It may, like Theme and Final, exhibit distinctive subpragmatic relations, sub-Theme or pre-Final, each with possible redundant government relations to the constituent it elaborates. Examples of elaboration in Figure 7: 3-5 all illustrate Theme elaboration. To get at the nature of the elaboration, one first peels back the outer Theme and Final. The medial (Figure 7:3) makes a pre-Final predication to the Theme ("Now all the . . . lands have begun to attack"), one which redundantly governs the entire Theme clause as argument: "Let it ("that all the . . . lands have . . .") become a matter of vengeance for you." Pronominal -at "it" is the Hittite counterpart of English grammatical conjunction "that" (cf. Justus 1980a:100f.). While Theme with pre-Final could be an independent sentence, in fact they function as complex Theme in this ruled unit, awaiting resultant Final "Do not [thereby] humiliate your divine name." Because Final verb *tepnuši* "humiliate" does not govern the Theme, the main statement evokes a redundant purpose/result reading (see translation).

The second elaboration of a Theme (Figure 7:4) is a sub-Theme in redundant grammatical apposition to the Theme (cf. Figure 6:4 where this noun-noun relation is distinctive inside the single clause). Peeling back initial Theme *Zintuhi* . . . *haššaš* "Zintuhi, granddaughter of . . .," one comes to its elaboration in nominal sentence ANA ¹ISKUR-za . . . TUDITTUM "[you are] breast ornament for the Stormgod . . ."⁸ The complex Theme is then governed by the Final verb *uškanzi* "they notice," and the redundant government eliminates any resultant reading. Final clause particles and verb agreement (*nu-ddu-za* . . . *uškanzi*) make both distinctive pragmatic and redundant government relation explicit. Initial *nu* continues the Theme (Raman 1973:126ff.), while resumptive enclitic -*ddu*- "you" refers specifically to Zintuhi: "they notice you . . . Zintuhi [who are] the breast ornament . . ." Although the overt pragmatic Hittite construction begins with the Theme and pivots on the description of *Zintuhi* in Theme and sub-Theme, an idiomatic English translation starts most naturally with the Final "[The Stormgod and Sungoddess] . . . notice you hourly" and makes the redundant Hittite government relation between elaborated Theme and Final overt (see translation and below on "descending" order). This ruled unit is ambiguously also a unit of quoted speech, one in a set of glorifications of a deity.

Figure 7:5, despite lack of *-wa(r)-*, is both a ruled unit and quoted speech. The priest addresses the god Telipinu in the Theme clause, and states the purpose of the address in the Final: "Go entreat Telipinu." Because medial elaboration "the King and Queen sent me" has no redundant government relation, its pragmatic relation as sub-Theme is not immediately obvious. But the three sentences, independent at one level, are bound pragmatically by both Theme-Final predication and by speaker-addressee roles inherent in the direct address form (Benveniste 1966:228ff.). It is their character as addressee to the priest (the speaker) which unites both vocative "Telipinu" and elaborating "King and Queen," a pragmatic identification which allows both Theme and elaboration to function as complex Theme to nongoverning Final result "Go entreat Telipinu." By contrast with "Telipinu" and "King and Queen" as Theme and sub-Theme, both Theme by virtue of discourse role, the relation between Theme "Zintuhi" and sub-Theme appositional "Stormgod and Sungoddess" is not based on speech act function, but on real world role. But in both examples Theme and sub-Theme have a pragmatic basis of relation. The sub-Theme is known by association with known Theme. Both have parallels with prayer structure (see below), but the Zintuhi unit lacks a final request and the Telipinu one differs in the point of view break occasioned by the role of the priest. Typical of structure with ungoverned Theme (cf. vocative below) are successive result and purpose readings which emerge with sub-Theme and Final: "You are mighty . . . [so] Muršili sent me . . . [in order to] entreat . . ."

To summarize Theme construction, one might sketch differences in Theme-Final construction as in Figure 8.

2.2.3 Focal Constructions

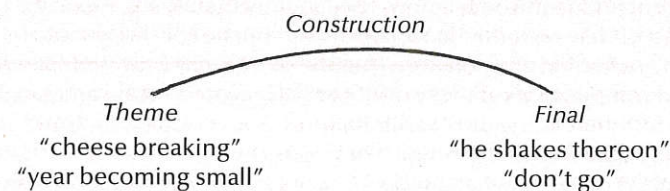
By definition, Focus introduces new topical information (Justus 1976), and in the Theme-Final construction it elaborates a Final. Like Theme and Theme elaboration, it can be redundantly modifying (relative) when governed, causal (cf. *kuit* "because" discussed in Justus 1981:10.4.3) when ungoverned, or temporal (cf. *kuwapi* "[when] where") when obliquely governed (Justus 1981:10.3.4). Only redundantly governed Focus elaboration will be discussed here.

By contrast with the sub-Theme of a Theme, the sub-Theme which elaborates a Final is marked by "relative" *kui-*, a form that inflects for case (Friedrich 1960:68f.). Held (1957) used terms "relative word" for *kui-*, "resumption" for forms in a following clause which refer back to *kui-* (cf. "what [kui-] goods I brought . . . , with those (resumption) I inlaid the temples"), and "relative sentence" for the two clauses of the *kui-* construction. English terms "antecedent" and "relative pronoun" ("I inlaid the temples with the goods [antecedent] that [relative pronoun] I brought from the raiding campaign") apply poorly to the distribution of "goods" in Hittite and to adjectival "what," where main clause order is reversed, "goods" does not "antecede," and "what" is an adjective, not a pronoun. It is this *kui-* that expresses Focus, the sub-Theme elaboration of a Final. But no special marker distinguishes the sub-Theme elaborating a Theme.

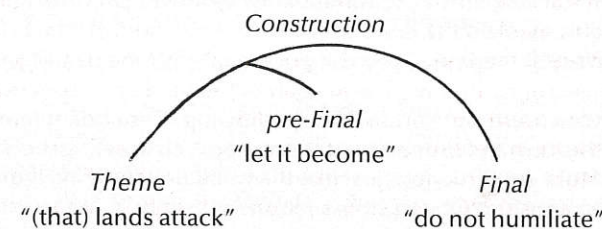
The literature on relative clauses is long now. Givón's (1979:Chapter 4) typology of relative clauses classifies the Hittite type as "loosely" pragmatic. Now that we recognize the primary topicality role (Justus 1976) and redundant relative function of *kui-* (Justus 1978) beside similarities between Hittite syntax and verb final type

Figure 8. Sketches of Theme Constructions

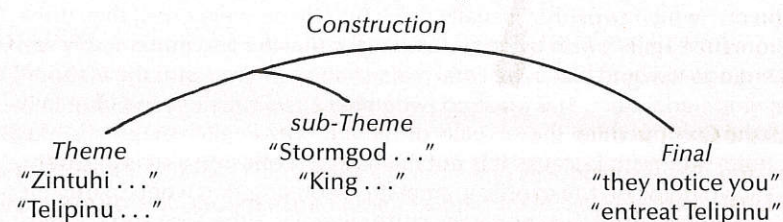
1. Simple Theme-Final (Figure 7:1-2)



2. Elaborated Theme: pre-Final elaboration (Figure 7:3)



3. Elaborated Theme: sub-Theme elaboration (Figure 7:4-5)



constructions (Raman 1973:9ff.; 166ff.; Justus 1981:8.2),⁹ it is not necessary to view this construction as evolutionarily prior. Instead one might recall Givón's suggestion that topically marked constructions lay the basis for reanalysis and change in language, and view distinctive topicality as a mechanism for loosening the consistency of verb final word order patterning as the language moves in the direction of verb initial patterns. One might further note that the pragmatic Hittite hierarchy which *kui-* provides has a parallel in English grammar distinctions between "that" and "which," restrictive and nonrestrictive (cf. Curme 1931:223ff.), a hierarchy of a different sort. But to understand relativization in language, it is important to take seriously related grammatical constructions as they change through different kinds of languages.

Closer analysis of redundantly modifying Theme and Focus clauses here reaffirms the old-new topic distinction, contrasts redundant modifying cohesion with redundant purpose/result, and associates Final elaboration with new information by contrast with known Thematic elaboration. If one can compare Prague school analysis of English theme (known information) and rheme (predication where new information is introduced at the clause level; cf. Halliday 1967) with multiclausal level

Hittite Theme and Final, the Final is where one would expect new information to be introduced.

Beyond their function to introduce new, redundantly modifying, topical information and their use of *kui-* with variable resumption, Focal clauses, as elaboration of the outer Theme-Final construction, are medial between Theme and Final. Figure 9:1 exemplifies all of these characteristics. Topic-Focal *kuit aššu* "what goods," as new information, contrasts with topic-Theme "temples," known from the previous ruled unit. The *kuit* clause medial between Theme "temples" and Final "I inlaid" elaborates the instrumental object of the Final verb, a relation made explicit in the sequence "relative" *kuit aššu* "what goods" ... *apedanda* "with that." Both Theme clause and Focal *kuit* introduce redundantly modifying information essential to the Final statement: "I inlaid the temples [Theme] with goods [Focus] ...," hence the lack of purpose/result reading.

In a similar OH ruled unit, Theme "The King and Queen sit" is at best obliquely governed by Final verb *tuhhušta* "it is finished," allowing a redundant temporal reading: "[When] the King and Queen sit, it is finished." Elaborating the Theme is an entire three-clause construction, just like the ruled unit itself in Figure 9:1. Known Theme ("The King and Queen sit") is redundantly modifying to pre-Final ("they drink"): "The King and Queen [who] sit, drink [those]." While initial Theme clause introduces and modifies the "subject" of "drink," the medial *kue* elaborates on its object: "which cups they usually drink full, those [very ones] they drink." More idiomatic English, with overt grammatical cohesion and more nearly verb initial word order would place the Final main statement first, with the elaboration after the modified noun: "It is finished [when/because] the King and Queen [who] sit, drink those cups which they usually drink full." The English pragmatic effect is, of course, quite different, because it is not the basis of cohesion as it is in Hittite. Contrast again between the overtly grammatical construction where participle "sitting" precedes "drink" in the same clause: literally, "the King and Queen sitting ... drink" (both OH and NH: StBoT 12, II 46 and StBoT 13, IV 47'-9' not cited) and pragmatic cohesion in Figure 9:2 parallels that above between governed participle (Figure 6: 5-6) and separate Theme clause (Figure 7: 1-2).

Muršili's prayer, like the Theme-Final prayer (Figure 7:5), is both quoted speech and ruled unit, and has a vocative Theme "Gods, my Lords, I, Muršili, ... have worshipped you" independent of (resultant) Final "hear me." Thematic elaboration in pre-Final ("hold your ear inclined to me [in this matter]") governs its own Focal elaboration "for what matter I have worshipped you," but not the Theme. As in prayer structure generally, the force of the vocative and the imperative is to render a noun relation independent of verbal government (see below). Redundant relative and purpose/result readings thus form the basis of corresponding idiomatic English constructions (cf. Figure 9:3). Independent outer Theme "You gods" and outer Final "hear me" elaborated by Thematic pre-Final and its own Focal elaboration parallels "The King and Queen sit" (Theme) with Final "it is finished" (Figure 9:2). Both have Focals which elaborate the pre-Final of an ungoverned Theme. Both are highly intricate layerings of elaboration which must be peeled back as one would an onion to understand the relationship.

Finally, paradigmatic of the Focal construction, is the quoted unit from the soldier's oath (Figure 9:4). Repeatedly, some evil fate is described (Theme), then a

Figure 9.

1. StBoT 18, 12ff.; 30; 119f. Rs. 55-58 (OH proclamation: ruled unit)

É ^dHalmašuittaš É ^dIŠKURnaš BELI=JA Û É
house of-Halmašuitta house of-Stormg. lord-my and house
^dŠiunašummiš ABNI
of-our-Šiu I-built
KASKALaz kuit aššu udahhun [ne ?] apedanda hališšīyanun
campaign-from what goods I-brought ptc-them with-it I-inlaid/plated

"The temples of Halmašuitta, the Stormgod, and of our Šiu [that] I built, I plated/inlaid with the goods which I brought from the campaign."

2. StBoT 12, 34 IV 41-2; StBoT 25, 69 Rs. IV 34'-5' (OH ritual; ruled)

[LUGAL] Û SAL.LUGAL ešanda šuwaru kue GAL^{hi.a} akkuškanzi
king and queen sit-3p full which cups they-drink
[ta] apuš=pat akuanzi tuhhušta
ptc those-ptc they-drink finished-3s

"It is finished [when] the King and Queen [who] are seated drink those cups which they usually drink full."

3. Goetze (1927:242 KUB XIV 13 + Vs. I 17-20 NH prayer: ruled and quoted)

DINGIR^{mes} EN^{mes}=JA kaša=šmaš ^mMuršili[š] ÌR=KUNU ^uSANGA=KUNU
god lords-my see!-you Muršili servant-your priest-your
arwanun
I-worshipped
nu=šmaš arwa[nun] kuedani memiyani
ptc-you I-worshipped for-which matter
nu=mu ištamaš[šan par]a epten nu-mu ištamaš[ten]
ptc-me ear forth take ptc-me hear-2p

"O gods, my Lords, see! I, Muršili, your servant, your priest, [who] have worshipped you, hold your ear [inclined] to me in this matter for which I worship you, [so that] you hear me."

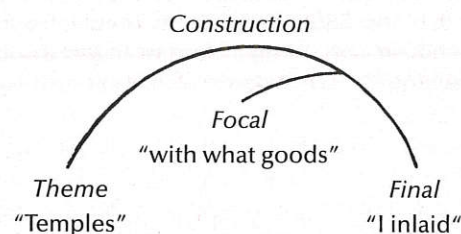
4. StBoT 22, 12 Rs. III 32-5 (NH soldier's oath: quoted speech)

kaš mahhan šannapilešta n=ašta kuiš kuš NIŠ DINGIR^{mes}
this as became-empty-3s ptc-ptc who these oaths (of) gods
šarrizzi
breaks-3s
nu apel É=ZU IŠTU DUMU.LÚ.ULÙ-LU GUD^{hi.a} =ŠU
ptc of-that-one house-his from son-mankind oxen- his
UDU^{hi.a} =ŠU QATAMMA šannapilešdu
sheep- his evenso let-it-become-empty

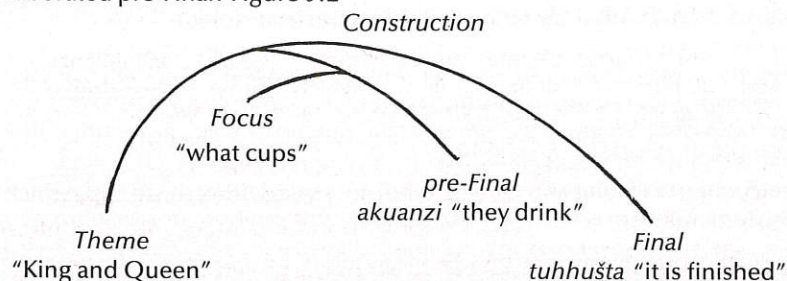
"As this [bladder] became empty, so let the house of the human being who breaks the oaths of the gods become empty of people, its sheep, [and] its oxen."

Figure 10. Focal Sketches

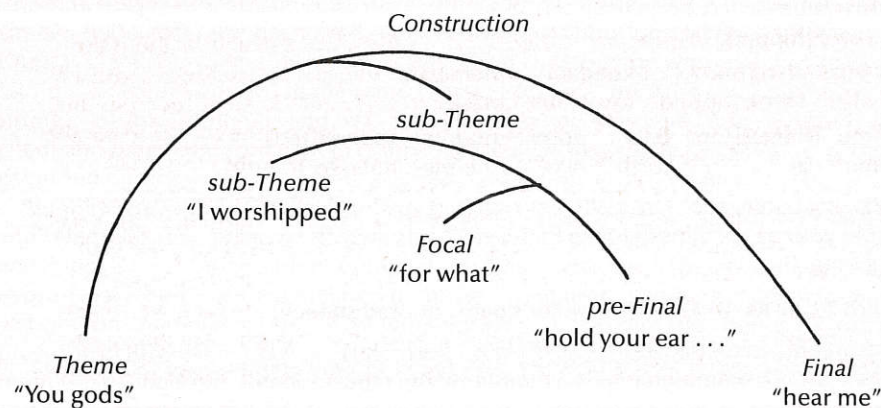
1. Basic Focal Construction: sub-Theme elaboration of a Final: Figure 9:1 cf. 9:4



2. Elaborated pre-Final: Figure 9:2



3. Quite elaborate pre-Final: Figure 9:3



hypothetical malefactor is introduced (Focal *kuiš*) whose fate is to be the same as that described in the Theme clause. Theme of the text as a whole is the breaking of the oath, with individual evil fates as Theme of individual scribal rulings. The example here takes the fate of the deflated bladder as Theme, the individual who breaks the oath as Focal, and the application of the fate to him as Final result of the ungoverned Theme. To summarize, one might sketch Focal constructions as in Figure 10.

2.3 Paradigmatic Variation

From analysis of ruled units and quoted units have emerged pragmatic bases of cohesion between clauses as opposed to overt grammatical cohesion within the clause. Data in this section confirm that structures beginning with a Theme, having optional medial elaboration, and ending with a Final main statement whose redundant relations derive grammatical noun modification and purpose/result, form the basis of Hittite syntax. Variation on structures which form the basis of minimal rulings and quoted speeches also make up the components of longer ruled and quoted units. Exemplary are the governed Theme elaboration in the fifth ruling of the Aphasia text (Figure 11:1) and governed Focal elaboration in the prayer from Muršili's annals (Figure 11:2). These longer structures are simply more complex layerings of sub-Theme and sub-Final developments within a larger unit. By contrast, constructions with Final verb *handaittat* "established" in the Aphasia text pair overtly governed infinitives which elaborate the Final (Figure 11:3) and parallel Focal elaborations governed by the pre-Final elaboration of the Final (Figure 11:4). These four variations on the Theme-Final structure form a short paradigm which argues for its reality as a basis of cognitive organization.

Governed Thematic elaboration in Figure 11:1, a five-clause structure about the already prescribed sacrifice of an ox as substitute for the speechless King, pivots on Theme "They bring the scape-ox." The structure fittingly ends in Final "even so they perform it [the ritual sacrifice]." Medial elaboration concerning the ox (three parallel *mahhan* "as, how" clauses of which I quote only one here) describes the ritual sacrifice, but is governed by Final verb *eššanzi* "they perform." Differences in meaning and word order with *mahhan* (initial *mahhan* "when," noninitial "as, how") find parallels in distribution of *mahhan* clauses dependent on Final (or pre-Final) verb *šak(k)-šek(k)* - "know." Governed (noninitial) *mahhan* ... *š.* means "know how ...," while obliquely governed *mahhan* ... *š.* is temporal. Similar government relations distinguish *man* "whether" (governed) from *man* "when" (not governed: Justus 1981:10.3). Like derived purpose/result readings between ungoverned Theme and Final, temporal meanings of *mahhan* and *man* are derived from obliquely governed contexts. One might compare too the more general linguistic tendency for temporal conjunctions to be derived from more concrete spatial forms (Traugott 1978 passim). Here obliquely governed Thematic results in temporal, as opposed to governed manner, *mahhan*: "when [mahhan] they bring the scape-ox, they perform the ritual as [mahhan] it is written ..."

Muršili's prayer (Figure 11:2) is the epitome of the Theme-Final where Theme is ungoverned, Final resultant, but Focal elaboration governed. The prayer begins by addressing the Sungoddess (Theme), proceeds to the reason for his prayer (the

Figure 11. Paradigmatic Variations

1. Aphasia (KBo IV 2 IV 41-6: ruled unit number 5 of the text)

mahhan=ma^{gud} puhugarin arnuwanzi
 when-ptc (ox) substitute they-bring
 nu ŠA^{gud} puhugari mahhan SISKUR annalaz IŠTU^{gis} LI.U₅
 ptc of (ox) substitute as ritual from-old from tablet
 gulaššan ...
 written ...
 n=at QATAMMA eššanzi
 ptc-it evenso they-perform

"When they bring the scape-ox [to Kummanni], they perform the ritual just as it is written concerning the scape-ox ritual on the old wooden tablet."

2. Muršili's Prayer (AM 20ff. KBo III 4 23-7)

(nu kiššan AQBI) dUTU^{uru} Arinna GAŠAN=JA
 (ptc thus I-said) Sungoddess Arinna lady-my
 arahzenaš=wa=mu=za KUR.KUR^{lu} KUR kuieš DUMU-lan halzeššir
 neighbors-ptc-me-ptc lands enemy which youth they-called
 nu=wa=mu=za tepnuškir
 ptc-ptc-me-ptc humiliated-3p
 nu=wa tuel ŠA dUTU^{uru} Arinna GAŠAN=JA ZAG^{hi.a} danna
 ptc-ptc of-you of Sungoddess Arinna lady-my borders to-take
 šanhiškiwan dair
 trying-sup. they-set
 nu=wa=mu dUTU^{uru} Arinna GAŠAN=JA kattan tiya
 ptc-ptc-me Sungoddess Arinna lady-my down step-2s-imp
 nu=wa=mu=kan uni arahzenaš KUR.KUR^{lu} KUR piran kuenni
 ptc-ptc-me-ptc these neighbors lands enemy before strike-2s-imp.
 (nu=mu dUTU^{uru} Arinna memian ištamašta)
 (ptc-me Sungoddess Arinna word heard-3s)

"Thus I spoke: 'O Sungoddess of Arinna, my Lady, the neighboring enemy lands which called me a youth humiliated me, [and] have begun to take your borders, O Sungoddess of Arinna, my Lady, (so) come down to me, O Sungoddess of Arinna, my Lady [and] strike these neighboring enemy lands before me.' [With the result that] the Sungoddess of Arinna heard my word."

3. Aphasia (KBo IV 2 III 49-51; development of first ruling)

dU^{uru} Manuzziya=ma katta ariyanun
 Stormgod (of) Manuzziya-ptc down I-made-consultation
 nu=šši^{gud} puhugariš piyawanzi IZlit wahnumanzi
 ptc-him (ox) substitute to-give with-fire to-burn
 MUŠEN^{hi.a} wahnummanzi handaittat
 birds to-burn established-3s

"But the Stormgod of Manuzziya [whom] I made the subject of oracular consultation, established that he be given a scape-ox [instead of the King], that it be burned with fire, that birds be burned."¹⁰

4. Aphasia (KBo IV 2 Rs. IV 28-34; second development in fourth ruling)

IŠTU^{gis} BANŠUR=ma=za=kan kuezza azzikkinun ...
 from table-ptc-ptc-ptc which I-usually-ate ...
 šašti=ya=za=kan kuedani šeškiškinun ...
 bed-in-and-ptc-ptc which I-usually-slept ...
 kuitta=ya imma UNUTUM anda weriyan ešta
 what-and ever utensil on called was-3s
 nu natta kuitki dattat IŠTU DINGIR-LIM QATAMMA handaittat¹⁰
 ptc not anything taken-3s from god evenso established

"So it was established by the god [that] no utensil whatever that was called out be taken, [neither] the table from which I ate, (nor) the bed in which I slept, [nor] ..."

behavior of the enemy lands: Focal elaboration), and ends with the resultant request for help (Final).

The classic prayer exchanges second person for first as discourse theme. Theme elaboration might give attributes of the deity, while elaboration of the Final establishes the basis of the relationship between deity and speaker, followed by Final request. Muršili's prayer, as quoted speech, is framed at the beginning by a verb of speaking (Akkadographic AQBI "I said") and at the end by reference to its efficacy: "The Sungoddess of Arinna heard my word." Outer Theme is the (vocative) address to the "Sungoddess of Arinna, my Lady," with resultant outer Final "[so] come down to me, O Sungoddess of Arinna, my Lady [so that you] slay these neighboring enemy lands before me!" at the end. Ordinarily, the semantic agent relation between Final verb(s) *tiya* ... *kuenni* "come ... slay" and thematic "Sungoddess" would constitute a government relation and rule out the resultant meaning of the Final. But here, precisely because of the pragmatically marked nature of the genre, taking addressee instead of speaker as discourse theme pragmatically isolates it from usual government relations. Grammatical devices for doing this are the well known vocative case for the noun itself, and the imperative for the potentially governing verb.

Between Theme and Final "come ... slay" stands the three clause Focal elaboration. Having peeled back outer Theme and outer Final, next one peels away Focal (sub-Theme elaborating the Final) *arahzenaš-mu* ... *kuieš* ... *halzeššir* "which neigh-

bors called me . . ." and pre-Final *nu-wa . . . dair* "they have begun . . ." down to innermost sub-Theme *nu-mu-wa-za tepnuškir* "they humiliated me." The entire Focal elaboration is then governed by the Final "come . . . slay [them]." Purpose/result reading with the request is derived from the independent character of vocative Theme, while governed Focus precludes further result derivation (cf. Figure 13).

Prayer introduction and summary ("Thus I said . . . the Sungoddess heard the matter for me") constitute contextual Theme-Final to the quoted prayer itself, where the prayer is governed as *memian* "word, speech, matter" by Final "heard," but Thematic introduction is not. The summary thus is also resultant: "I speak, [therefore] hear."

Paradigmatic uses of middle voice *handaittat* "established"¹⁰ in the Aphasia text raise questions as to the purpose of the text, perhaps as a school paradigm of Hittite syntactic structure. At the end of the text the King had certainly not regained his speech, so one wonders how he dictated it to the scribe. But suffice it here to note the systematic variation in structure of the two uses. As noted above, overtly governed and redundantly governed Theme use of the participle contrast in word order patterning (Figure 6:5-6 with Figure 7:1-2). The same contrast appears between governed infinitives before *handaittat* (Figure 11:3) and redundantly governed Focal elaboration with *kui-* forms (Figure 11:4). The first is a Theme-Final construction where governed Theme "I made the Stormgod subject of oracular consultation" has governing Final "[he] established him[self] to [be] give[n] a scapeox . . ."¹⁰ Elaboration, however, is not pragmatic, but overtly governed in infinitive phrases "to give him a scape-ox," "to burn it with fire," and "to burn birds." By contrast the next use of *handaittat* (Figure 11:4) redundantly governs a preceding set of parallel Focal clauses inside a larger Theme-Final construction. Focal elaboration begins "From which table I usually ate" and ends with redundantly governing Final "[that] nothing [of these] be taken, so it was established by the god," where "nothing be taken" summarizes the preceding set of *kui-* clauses which enumerate possessions of the King. The pragmatic effect of using *kui-* elaboration is to emphasize for a limited length of text new information as opposed to use of the infinitives which allow focus on the act of "establishing."

3.0 Crosslinguistic Parallels

3.1 Ancient Greek

Rhetorical treatises in Greek and Latin describe the need for beginning and end (Aristotle *Rhetorica* III 9, 2f.) and opine that saving the main statement till the end effects a more tightly cohesive structure than the loosely connected sequences that result when elaboration follows rather than precedes the main statement (Denniston 1960:66ff.). Rhetorical devices which Aristotle praises include the use of parallel thought and antithesis. Such constructions are well known in both Greek and Latin as periodic sentence structure, the structure which the nineteenth-century classicist Henri Weil termed "ascending" by contrast with "descending" structures in modern French, English, and German, differences which appear to parallel differences in word order type.

Predictably, Hittite patterns are ascending in type, only more regularly so than patterns of later, less consistently verb final Greek and Latin (Justus 1981a:447-9). The older ascending structure states some initial position, then builds ("ascends") to a final main statement about it, while the newer constructions start with the main statement and "descend" to the detail.

If one contrasts different versions of the first five clauses of Muršili's narration, the archaic and literal order is ascending: [As] I marched to Til-Kunnu, there came a *haršiharši*. [And] the Stormgod further kept thundering [so] terribly [that] I feared, [so that] the speech in my mouth became small." The idiomatic order, by contrast, descends: "The speech in my mouth became small [because, when] I marched to Til-Kunnu there came a *haršiharši*, [in which] the Stormgod kept thundering [so] terribly [that] I feared." One notes further that the ascending order of the original is verb final or some variation thereon, while the newer has variant verb initial patterns.

Like Muršili's Hittite prayer to the Sungoddess (Figure 11:2), the Homeric prayer of Chryses to Apollo is announced by a verb of speaking ("he prayed") and the result summarized afterward: "Thus he spoke praying, him [whom] Phoebus Apollo heard." Chryses, who earlier asked Apollo to avenge him on the Achaeans, now prays that Apollo's plague, which Chryses had asked for, be removed.

The prayer itself begins with the addressee as Theme ("Silverbowed one" – i.e., "Apollo") and ends with Final request: "grant this . . . ward off . . ." (cf. Muršili's "come . . . slay"). But Chryses' prayer uses the relative *hos* clause to elaborate the Theme ("Silverbowed one, [you] who guardest Chryse and most holy Cilla . . .") by contrast with Hittite Theme elaboration without any relative word: "Telipinu, you [are] a great and mighty god" (Figure 7:5). Although the Final elaboration in Chryses' prayer takes the form of three clauses like that of Muršili's, the Greek focal lacks a relative like Hittite *kuieš* to introduce the opponent "Achaeans." Instead, it has enclitic particle *de* which often introduces a secondary idea after the initial thematic one with *men*. Here sub-Thematic speaker "You honored *men* me" contrasts with Focal "Greatly *de* you smote the Achaean army."¹¹ But again like Hittite Focal "enemies," Greek Focal "Achaeans" is governed by the Final request verb "ward off": "Ward off this plague from the Danaeans [Achaeans]."

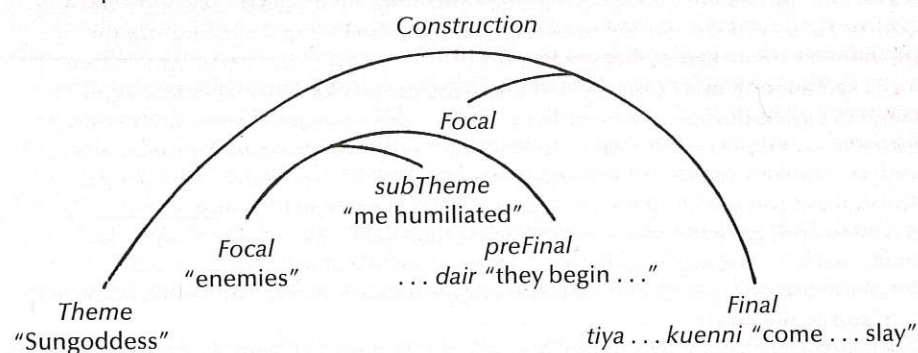
Literal translation of the prayer is ascending and fittingly archaic: "Hear me, O Silverbowed One, [you] who guard Chryse and most holy Cilla, [who] also rule mightily over Tenedos. Indeed, if you ever heard my prayer [in that] you, on the one hand [*men*] honored me, on the other hand [*de*] you smote the Achaean army well, then now too grant this wish for me: ward off now the unseemly plague from the Danaeans."

By contrast more idiomatic phrasing is descending: "Grant this wish of mine, that you remove the plague from the Achaeans whom you smote well, because I prayed to you before to avenge me on them. Since you guard Chryse and sacrosanct Cilla, since you rule over strong Tenedos, hear me, you with the silver bow."

One might sketch the prayer structures as in Figure 12 to visually show how the Focals elaborate the Final in both, but how the Greek relative clause elaborates the Theme. Compare Hittite Theme elaboration in Figure 7 and 8, particularly Figure 7:4-5 and Figure 8:3.

Figure 12. Prayer Sketches

1. Complex Focal Elaboration: Muršili's prayer (Figure 11:2)



2. Elaborated Theme and Complex Focal Elaboration: Chyrses' prayer

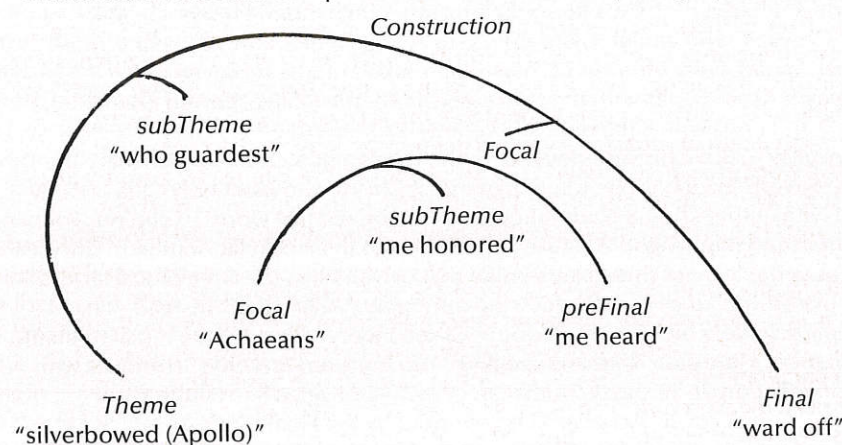


Figure 13. Akkadian ARM X 92, 9-10

"Sin-mušallim ihbulanni=ma 'Tariti ilqi
 Sin-mušallim wronged-me-ptc Tariti took-3s
 ù ina[nn]a ina bitišu wašbat
 ptc* now in house-his stays-3s-feminine-stative

"Sin-mušallim has done me wrong in that [-ma] he has taken Tariti, [with the result that] now she is staying at his house."

*Usually translated "and."

3.2 Akkadian

But the periodic structure where Final clauses correspond to Aristotle's "end" and a redundant resultant reading emerges when the Final verb does not govern the Theme or Focus is not confined to older IE, nor are the Hittite scribal rulings that mark them. Lest one forget that the Hittites borrowed the script and scribal ruling from Akkadian, one must observe that Old Babylonian Akkadian from Mari uses some of the same devices. Particles keep track of thematic development, the order is ascending, and purpose/result is derived from context. Compare Figure 13 where a particle ù introduces Final "now she is staying at his house" much as Hittite *nu* introduces clauses which continue a preceding Theme. Since the verb *wašbat* "stays" does not govern Theme "Sin-mušallim wronged me," result is derivative: "Sin-mušallim ... has taken Tariti, [so that] now she is staying at his house."

3.3 Greek Punctuation

Interestingly, earliest Greek punctuation used a dividing stroke known as early as Aristotle as the *paragraphos*. It was inserted at the beginning of the line, but essentially to mark the preceding periodic sentence as finished, much as the cuneiform ruling ends a speech unit in Hittite. Variant markers which segment such chunks included spacing between last word of the preceding "paragraph" and first word of the next. Use of capitals to reinforce the separation also precede the Alexandrian system of separating various degrees of pause and accentuation of words and word groups attributed to Aristophanes of Byzantium (3rd century BC: Thompson 1966:67-70; cf. also Allen 1973:4f.; 18ff.). This shift from marking of content units to our modern punctuation based on breath group and intonation contour needs further study in conjunction with changes from pragmatic cohesion between clauses, ascending periodic structure, and verb final word order to pragmatic subject-predicate cohesion, descending structure, grammatical cohesion between clauses, and verb initial word order. It seems clear, however, that our modern paragraph structure is a relic, both in name and in basis of cohesion, of older periodic structure. The older structure correlated rather with verb final patterns, redundantly derived purpose/result without conjunction, and temporal value of conjunctions from redundantly ungoverned or weakly governed context, while the newer correlates with verb initial patterns, lexically encoded purpose/result, and temporal subordination. Further crosslinguistic study, of course, is necessary to gauge the extent of correlation of English and Hittite differences with systematic differences in language generally.

4.0 Conclusion

The early IE periodic structure based on ascending order with medial elaboration between pragmatic Theme and Final main statement and verb final word order patterns lies behind the visual Hittite sentence punctuated by horizontal scribal rulings. The *paragraphos* of early Greek, used before the language shifted strategy enough to change the basis of punctuation, is the alphabetic counterpart of the cuneiform convention. Later developments of comma, period, and capitals reflect basic changes in language structure, changes in basis of clausal cohesion and other language patterns with which it correlates.

1. Data for this analysis includes the OH corpus (Raman 1973:201-3), standard edited texts in the series (StBoT and THeth) as well as older editions of the treaties, prayers, annals, selected letters, and texts which, according to Professor Annelies Kammenhuber's Thesaurus files, attest either *šak(k)-/šek(k)-* "know" or *hališšiya-* "plate, inlay." Work here represents research begun in Summer 1975 on NSF research grant GSOC-7002248 and added to during periods of research supported by the University of California (Berkeley), 1977-81, including work on IE syntax and prayer structure in general. I am grateful, too, to Linda Coleman and Julian Wheatley for discussion of assumptions which lie behind the script and its transliteration, and to Linda Coleman for comments on a first draft. And special thanks belong to Marvin Powell for careful editorial work on earlier versions of this paper.

2. Emeneau's (1980:1-3; 85ff.) work on language change, language type, and linguistic area is followed now by McAlpin's (1981:55f.; 129f.) account of Dravidian and Elamite typology and genetic affiliation. The use of syntax in cognate relations remains an important, debated topic.

3. The Sungoddess of Arinna is, by contrast, always written logographically without phonetic complement (cf. Figure 11:2; Laroche 1947:105f.).

4. Focus here is on scribal lines segmenting the Huwarlu text from the Aphasia text and columns from each other. For the text of Rs. IV 41ff. see Figure 11:1.

5. Professor Horst Klengel and A. Lübse of the Akademie der Wissenschaften der DDR, Zentralinstitut für Alte Geschichte und Archäologie, Bereich Alter Orient, kindly made available this excellent photograph of KBo IV 2 III 40ff., originally for a project which has grown into a revision in progress of Goetze and Pedersen's (1934) German edition. Issues here are basic to the new edition.

6. Double rulings often, but not always, separate the colophon from the text (cf. KBo V 1 and 2; KBo XI 1, 12, and 14). The colophon varies in length and gives such information as to whether the text is finished on one tablet, the name of the scribe who copied the tablet, and perhaps a brief title of contents (cf. Laroche 1949). If correctly restored from other fragments, the Aphasia text may have been known as "When the Sun, Muršili, heard the thunder at Til-Kunnu." The restoration is from new fragment XLIII 50, 9-10 plus XII 31 Rs. Rs. 27: [kuw]api /NA^{ur}Til-^mKun[nu] ["^mMur]šili tetheššar (written logographically KAXIM-ar) ištama[šta], all read from hand copies of the tablets.

7. The tablet KUB VI 46 uses slanted verticals going slightly below the line to insert divisions which KUB VI 45 made with scribal rulings. The ruled unit KUB VI 45 III 40-44, for example, has the same content as KUB VI 46 IV 9-14 which is part of a larger ruled unit on that tablet. The slanted vertical in line 14 "corrects" for the missed ruling. This is not an isolated "correction," moreover. Again KUB VI 46 uses the divider to separate midline in IV 48 what KUB VI 45 IV 47-48 placed between rulings. Other dislocations can only be discussed with the entire text.

Discrepancies in ruling divisions which variously place speech introductions at the end of a preceding ruling or at the beginning of the next in texts like the Ullikummi (Güterbock 1951:142f.) and the Muwattalli ritual-prayer here must result from ambiguity between direct speech introduction which precedes (cf. KUB VI 46 III 62-3 "I called aloud: ištanu calls [you] from your temples.") and governing verb of indirect speech which follows (cf. KUB VI 45 III 21f. "The gods [that] I prayed to on

that day, for what things I prayed, [to them] I called aloud."). Compare direct (Figure 6:4) and indirect speech (Figure 6:6) above as well.

8. Particle *-za* is enclitic on the first word here of a nominal sentence with second person "subject" (Hoffner 1969). In verbal sentences it functions as middle/reflexive (Friedrich 1960:131-3; Justus 1981:9.3).

9. C. Lehmann (1979) rightly recognizes the role of topicalization in IE relativization, but wrongly interprets (1979:6 and 19) my criteria for verb final Hittite relative clauses as mere clause order. Such patterns are not in themselves verb final, but in conjunction with other patterns compatible with the verb final system. Correlates of the Hittite variant of verb final patterns include, besides those discussed elsewhere (Justus 1981:8.2) and derivative relative and purpose/result discussed here, derivative adverbial temporals without overt conjunction as well as oblique *mahhan* and *man* (cf. Figure 11:1 with discussion and references).

10. Older IE had active and middle rather than active and passive voice distinctions where middle uses resemble intransitive ("The vase broke" or "The cut hurt"), reflexive ("John hurt himself"), and passive ("John was hurt"). Parallel uses occur with middle verb *handaitat* (written SIxSÁ-at). The first (not cited here) is without objects: "The Stormgod . . . was established/emerged (from oracular consultation)." The second (Figure 11:3) reflects an action in the interest of the Subject/Theme: "The Stormgod . . . established (for) him(self) to (be) give(n) a scapeox . . .," while the last (Figure 11:4) is passive: "It was established by the god (that) none of these things be taken." But passive translation of the infinitive (Figure 11:3) depends on context, not form, as Hittite infinitives do not differentiate voice.

11. Elsewhere Zirin (1977) showed how uses of *de* in Homer indicate continuation of the secondary topic.

Abbreviations

Cf. HW² and CHD for fuller bibliography

AM Annals of Muršili (Goetze, Albrecht. 1967 [1933]. Die Annalen des Muršiliš. Darmstadt: Wissenschaftliche Buchgesellschaft.)

ARM Archives Royales de Mari.

CHD Chicago Hittite Dictionary, ed. Hans G. Güterbock and Harry A. Hoffner. Oriental Institute. Chicago: Chicago University Press.

CTH Laroche, Emmanuel. 1972. Catalogue des textes hittites, premier supplément. Revue Hittite et Asiatique 30.94-133.

_____. 1972. Catalogue des textes hittites. Études et Commentaires 75. Paris: Klincksieck.

HdOr Handbuch der Orientalistik. Altkeinasische Sprachen, ed. Johannes Friedrich. 1. Abt. 2ter Band. 1-2 Abschn. Lfg. 2.

HW Friedrich, Johannes. 1952. Hethitisches Wörterbuch. Heidelberg: Winter.

HW² _____, and Annelies Kammenhuber. 1975-. Hethitisches Wörterbuch. 2te Aufl. Heidelberg: Winter.

KBo Keilschrifttexte aus Boghazköi.

KUB Keilschrifturkunden aus Boghazköi.

- StBoT Studien zu den Boğazköy-Texten, ed. Heinrich Otten. Wiesbaden: Harrassowitz.
- StBoT 1 Carruba, Onofrio. 1965. Das Gelübde der Königin Puduhepa an die Göttin Lehwani.
- StBoT 4 Werner, Rudolf. 1967. Hethitisches Gerichtsprotokolle.
- StBoT 7 Otten, H., and W. von Soden. 1968. Das akkadisch-hethitischen Vokabular KBo I 44 – KBo XIII 1.
- StBoT 8 Otten, H., and Vladimír Souček. 1969. Ein althethitisches Ritual für das Königspaar.
- StBoT 9 Riemschneider, Kaspar K. 1970. Babylonische Geburtsomina in hethitischer Übersetzung.
- StBoT 10 Carruba, Onofrio. 1970. Das Palaische: Texte, Grammatik, Lexikon.
- StBoT 12 Neu, Erich. 1970. Ein althethitisches Gewitterritual.
- StBoT 13 Otten, H. 1971. Ein hethitisches Festritual (KBo XIX 128).
- StBoT 18 Neu, Erich. 1974. Der Anitta-Text.
- StBoT 19 Burde, Cornelia. 1974. Hethitische Medizinische Texte.
- StBoT 20 Rüster, Christel. 1972. Hethitische Keilschrift-Paläographie.
- StBoT 22 Oettinger, Norbert. 1976. Die Militärischen Eide der Hethiter.
- StBoT 25 Neu, Erich. 1980. Althethitische Ritualtexte in Umschrift.
- THeth Texte der Hethiter, ed. Annelies Kammenhuber. Heidelberg: Winter.
- THeth 6 Ünal, Ahmet. 1978. Ein Orakeltext über die Intrigen am hethitischen Hof (KUB XXII 70).
- THeth 7 Kammenhuber, A. 1976. Orakelpraxis, Träume und Vorzeichenschau bei den Hethitern.
- VAT Inventory numbers of tablets in the Staatliche Museen in Berlin.
- 1s, 2s, 3s 1st, 2nd, 3rd person singular
- 1p, 2p, 3p 1st, 2nd, 3rd person plural
- acc. accusative case
- gen. genitive case
- imp. imperative
- nom. nominative case
- ptc particle
- Rs. Rückseite (back of the tablet)
- sup. supine
- Vs. Vorderseite (front of the tablet)

References

- Allen, W. S. 1973. *Accent and Rhythm*. Cambridge Studies in Linguistics 12. Cambridge: Cambridge University Press.
- Aristotle. *Rhetoric*, trsl. by Rhys Roberts. (1954). N. Y.: Modern Library.
- Benveniste, Émile. 1966 [1946]. *Structures des relations de personne dans le verbe*. *Problèmes de linguistique générale*, 225–36. Bibliothèque des Sciences Humaines. Paris: Gallimard.
- Buck, Carl D. 1949. *A Dictionary of Selected Synonyms in the Principal Indo-European Languages*. Chicago: Chicago University Press.
- Burrow, T. 1973. *The Sanskrit Language*. London: Faber and Faber.
- Bush, Frederic William. 1964. *A Grammar of the Hurrian Language*. Brandeis University dissertation. Ann Arbor: University Microfilms.
- Ceram, C. W. 1956. *The Secret of the Hittites*. Trsl. by R. and C. Winston. N. Y.: Knopf.
- Chadwick, John. 1967. *The Decipherment of Linear B*. Cambridge: Cambridge University Press.
- Chafe, Wallace. 1976. Givenness, contrastiveness, definiteness, subjects, topics, and point of view. *Subject and Topic*, ed. Charles Li, 25–55. N. Y.: Academic Press.
- Cooper, Jerrold S. 1971. Bilinguals from Boghazköi I. *Zeitschrift für Assyriologie* 61.1–22.
- Curme, George O. 1931. *A Grammar of the English Language*. Vol. II: Syntax. (republished 1977, Essex, Conn.: Verbatim).
- Denniston, J. D. 1960. *Greek Prose Style*. Oxford: Clarendon.
- Diringer, David. 1948. *The Alphabet. A Key to the history of mankind*. N. Y.: Philosophical Library.
- Emeneau, Murray. 1980. *Language and Linguistic Area: Essays*. Ed. with an introduction by Anwar S. Dil. Stanford: Stanford University Press.
- Fillmore, Charles. 1968. The case for case. *Universals in Linguistic Theory*, ed. Emmon Bach and R. T. Harms, 1–88. N. Y.: Holt.
- Friedrich, Johannes. 1960. *Hethitisches Elementarbuch I*. 2te Aufl. Heidelberg: Winter.
- Gardiner, Sir Alan. 1957. *Egyptian Grammar*. 3rd ed. Oxford: Ashmolean Museum.
- Gelb, I. J. 1963. *A Study of Writing*. 2nd ed. Chicago: Chicago University Press.
- Gimbutas, Marija. 1977. The first wave of Eurasian steppe pastoralists into Copper Age Europe. *Journal of Indo-European Studies* 5.277–338.
- _____. 1974. An archaeologist's view of Proto-Indo-European in 1975. *Journal of Indo-European Studies* 2.289–307.
- Givón, Talmy. 1979. *On Understanding Grammar*. N. Y.: Academic Press.
- Goetze, Albrecht. 1957. *Kleinasiens. Kulturgeschichte des alten Orients*. *Handbuch der Altertumswissenschaft* 3.1.3.3.1 München: Beck.
- _____. 1927. Die Pestgebiete des Muršiliš. *Kleinasiatische Forschungen* I, 2.161–251.
- _____, and Holger Pedersen. 1934. *Muršilis Sprachlehre*. Det Kgl. Danske Videnskabernes Selskab. *Historisk-filologiske Meddelelser* XXI, 1.
- Greenberg, Joseph H. 1966. Some universals of grammar with particular reference to the order of meaningful elements. *Universals of Language*, ed. J. H. Greenberg, 73–113. 2nd ed. Cambridge, Mass.: MIT Press.
- Greene, David. 1977. *Archaic Irish. Indogermanisch und Keltisch*, ed. Karl H. Schmidt, 11–33. Wiesbaden: Reichert.

- Gurney, Oliver R. 1952. *The Hittites*. Baltimore: Penguin Books.
- _____. 1940. Hittite prayers of Muršili II. *Annals of Archaeology and Anthropology* 27.
- Gusmani, Roberto. 1964. *Lydisches Wörterbuch*. Heidelberg: Winter.
- Güterbock, Hans G. 1980. An addition to the prayer of Muršili to the Sungoddess and its implications. *Anatolian Studies* 30.41–50.
- _____. 1951. The Song of Ullikummi. Revised text of the Hittite version of a Hurrian myth. *Journal of Cuneiform Studies* 5.35–61.
- Halliday, M. A. K. 1967. Notes on transitivity and theme in English, II. *Journal of Linguistics* 3.199–244.
- Hawkins, J. D., Anna Morpurgo Davies, and Günter Neumann. 1973. Hittite hieroglyphs and Luwian: new evidence for the connection. *Nachrichten der Akademie der Wissenschaften in Göttingen. Phil.-Hist. Klasse, Nr. 6*.
- Held, Warren H., Jr. 1957. *The Hittite relative sentence*. Language Dissertation 55. Baltimore: Waverly Press.
- Heubeck, Alfred. 1969. *Lydisch*. HdOr, 399–427.
- Hockett, Charles 1958. *A Course in Modern Linguistics*. N. Y.: Macmillan.
- Hoffner, Harry A. 1969. On the use of Hittite -za in nominal sentences. *Journal of Near Eastern Studies* 28.225–30.
- Homer, *Iliad*, ed. Walter Leaf and M. A. Bayfield (1962) with notes. N. Y.: Macmillan.
- Jucquois, Guy. 1972. Aspects du consonantisme Hittite. *Hethitica I*, ed. G. Jucquois, 59–128. *Travaux de la Faculté de Philosophie et Lettres de L'Université Catholique de Louvain VII*. Louvain.
- Justus, Carol F. 1981. *šak(k)-/šek(k)-"know"*. *Materialen zu einem hethitischen Thesaurus*, ed. Annelies Kammenhuber. Lfg. 10–11. Nr. 7. Heidelberg: Winter.
- _____. 1981a. Review of *The Order of Words in the Ancient Languages Compared with that of the Modern Languages*, by Henri Weil, new ed. by Aldo Scaglione. *Romance Philology* 34.442–450.
- _____. 1980. Typological symmetries and asymmetries in Hittite and Indo-European complementation. *Linguistic Reconstruction and IE Syntax*, ed. Paolo Ramat, et al., 183–206. *Current Issues in Linguistic Theory 19*. Amsterdam Studies in the Theory and History of Linguistic Science IV. Amsterdam: Benjamins.
- _____. 1980a. Implications of pre-complementizers with Hittite *šak-/šek-* "know." *Papers from the 4th International Conference on Historical Linguistics*, ed. Elizabeth C. Traugott et al., 97–106. *Current Issues in Linguistic Theory 14*. Amsterdam Studies . . . IV. Benjamins.
- _____. 1979. Hittite *ištamaš-* "hear": some syntactic implications. *Münchener Studien zur Sprachwissenschaft* 38.93–115.
- _____. 1978. Syntactic change: evidence for restructuring among coexistent variants. *Journal of Indo-European Studies* 6.107–32.
- _____. 1976. Relativization and topicalization in Hittite. *Subject and Topic*, ed. Charles Li, 213–245. N. Y.: Academic Press.
- _____. ms. On the relationship between arrangement and borrowed entities in language structure. Paper presented at the Modern Language Association, December 1977, New York City.
- Kammenhuber, Annelies. 1969. *Hethitisch, Palaisch, Luwisch und Hieroglyphen-luwisch*. HdOr, 119–357.

- _____. 1969a. Die Sprachstufen des Hethitischen. *Zeitschrift für vergleichenden Sprachforschung* 83.256–289.
- _____. 1969b. *Hattisch*. HdOr, 428–546.
- _____. 1961. *Hippologica Hethitica*. Wiesbaden: Harrassowitz.
- _____. 1959. *Esquisse de grammaire Palaïte*. *Bulletin de la Société de Linguistique de Paris* 54.18–45.
- Keenan, Edward L. 1976. Towards a universal definition of "Subject." *Subject and Topic*, ed. Charles Li, 247–301. N. Y.: Academic Press.
- Kořak, Silvin. 1980. Dating of Hittite texts: a test. *Anatolian Studies* 30.31–39.
- Kronasser, Heinz. 1966. *Etymologie der hethitischen Sprache I*. Wiesbaden: Harrassowitz.
- _____. 1956. *Vergleichende Laut- und Formenlehre des Hethitischen*. Heidelberg: Winter.
- Kuno, Susumu. 1976. Subject, Theme, and Speaker's empathy—a reexamination of relativization phenomena. *Subject and Topic*, ed. Charles Li, 417–444. N. Y.: Academic Press.
- Lakoff, Robin T. 1972. Another look at drift. *Linguistic Change and Generative Theory*, ed. Robert P. Stockwell and R. K. S. Macaulay, 172–198. Bloomington: Indiana University Press.
- Laroche, Emmanuel. 1978. *Glossaire de la langue hourite I*. *Revue hittite et asianique* 34 [1976].
- _____. 1949. La bibliothèque de Hattasa. *Archiv Orientalní* 17, 2.7–23.
- _____. 1947. *Recherches sur les noms des dieux hittites*. Paris: Maisonneuve.
- Lehmann, Christian. 1979. Der Relativsatz vom Indogermanischen bis zum Italienischen. *Die Sprache* 25.1–25.
- Lehmann, W. P. 1976. *Descriptive Linguistics: an introduction*. N. Y.: Random House.
- _____. 1976a. *Syntactic Typology*. Austin: University of Texas Press.
- _____. 1974. *Proto-Indo-European syntax*. Austin: University of Texas Press.
- _____. 1973. *Historical Linguistics: an introduction*. N. Y.: Holt.
- _____. 1967. *A Reader in 19th Century Historical Indo-European Linguistics*. Bloomington: Indiana University Press.
- Li, Charles, and Sandra A. Thompson. 1976. Subject and topic: a new typology of language. *Subject and Topic*, ed. Charles Li, 457–489. N. Y.: Academic Press.
- Macdonell, Arthur A. 1916. *A Vedic Grammar for Students*. Delhi: Oxford University Press.
- McAlpin, David W. 1981. Proto-Elamo-Dravidian: the evidence and its implications. *Transactions of the Philological Society (Philadelphia)*. Vol. 71, Part 3.
- Neumann, Günter. 1969. *Lykisch*. HdOr, 358–396.
- Otten, Heinrich. 1964. *Schrift, Sprache, and Literatur der Hethiter*. *Neuere Hethiterforschung*, ed. Gerold Walser, 11–22. *Historia Einzelheft 7*.
- _____. 1956. *Hethitische Schreiber in ihren Briefen*. *Mitteilungen des Instituts für Orientforschung* 4.179–189.
- Pokorny, Julius. 1959. *Indogermanisches etymologisches Wörterbuch*. München: Francke.
- Raman, Carol F. Justus. 1973. *The Old Hittite Relative Construction*. University of Texas Dissertation. Ann Arbor: University Microfilms.

- Rost, Liane. 1956. Die ausserhalb von Boğazköy gefundenen hethitischen Briefe. *Mitteilungen des Instituts für Orientforschung* 4.328–350.
- Sapir, Edward. 1949 [1921]. *Language. An introduction to the study of speech*. N. Y.: Harcourt.
- Schmidt, Karl H. 1980. Continental Celtic as an aid to the reconstruction of Proto-Celtic. *Zeitschrift für vergleichende Sprachforschung* 9.172–197.
- Thompson, Edward Maunde. 1966. *A Handbook of Greek and Latin Paleography*. Chicago: Argonaut.
- Traugott, Elizabeth C. 1978. On the expression of spatio-temporal relations in language. *Universals of Human Language*, ed. by J. H. Greenberg. Vol. 3: Word structure, 369–400. Stanford: Stanford University Press.
- Watkins, Calvert. 1964. Preliminaries to the reconstruction of Indo-European sentence structure. *Proceedings of the Ninth International Congress of Linguistics*, ed. Horace G. Lunt, 1035–1045. *Janua Linguarum. Series Minor* XII. The Hague: Mouton.
- _____. 1963. Preliminaries to a historical and comparative analysis of the syntax of the Old Irish verb. *Celtica* 6.1–49.
- Zirin, Ronald. 1977. Particles in Homeric discourse. Paper presented at the Workshop on Aspect and Discourse, organized by Joan Bybee, SUNY-Buffalo, May 14, 1977.

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The Temple Scribe in Chaldean Uruk

The education and activities of the Eanna temple scribe in sixth-century B C. Uruk varied little from what they had been prior to the Chaldean era. The cuneiform writing system was still in use, and Akkadian economic documents continued to be composed and literary texts preserved in a manner not unlike that of previous periods. These traditions, however, did not preclude the scribe's attending to his own private business affairs or prevent his engaging in the collection or composition of literary documents that reflect either his own personal interests or the necessity to prepare materials with decidedly political overtones. The result of these endeavors is a body of texts which, in many respects, indicates both the influence of spoken Aramaic on written Akkadian and the everchanging political situation (from both official and private perspectives) in southern Mesopotamia in the Chaldean period.

With the fall of Nineveh in 612 BC the once mighty Assyrian empire passed into history. A new star was on the rise in the form of the Chaldeans; power shifted from northern Mesopotamia back to Babylon. The conquests of Nabopolassar¹ (626–605) the founder of the Chaldean dynasty, however, did not result in a severing of ties with the past. Like the Amorites and Kassites of an earlier age, these Chaldeans were well aware of the cultural achievements of their predecessors and sought to reestablish ties with them. The libraries of the Assyrian king Ashurbanipal lay in ruin; yet the scribal schools of palace and temple in southern Mesopotamia sought to perpetuate the use of the cuneiform system of writing and, as a consequence, to preserve a tradition long associated with bygone eras. Cuneiform, and the clay tablets on which it was written, were not adapted to the writing of Aramaic, yet their use was continued, partly because tradition dictated that this be so and partly because Akkadian, the written language of court and commerce, had always been linked with the system and was still a facet of everyday life in sixth-century Mesopotamia.

This can best be seen in examining the documents from the southern Mesopotamian city of Uruk (modern Warka) and its great Eanna temple (the center of worship of the goddess Ishtar)² that was for so long a center of economic life. Uruk is a site that has yielded hundreds of tablets from earliest times as well as from the Chaldean period; although the vast majority of this material can be dated to the sixth century, a portion of it attests to the use of cuneiform in Uruk as early as the third millennium BC.³

While discussion concerning the original purpose of cuneiform writing continues, there can be no question that record keeping was an important part of every