

FEDERICO GIUSFREDI

# A Study in the Syntax of the Luwian Language



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TEXTE DER HETHITER  
Philologische und historische Studien  
zur Altanatolistik

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## Preface

This book contains the results of the project SLUW, that received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No 655954. The project was carried out at the University of Verona between June 2015 and May 2017 and consisted in the study of the syntactic structures and patterns attested in the corpora of Cuneiform and Hieroglyphic Luwian. Further information and materials can be found at <http://luwiansyntax.info>. I wish to express my gratitude to the European Union for financing this research, and to the University of Verona, Dept. of Cultures and Civilizations, for hosting it.

So much for the institutions. Let us move on to people. As an orientalist occasionally dealing with a linguistic topic, it would have been impossible for me to complete this work without the help and advice of linguists. The scientific supervisor of the project, Paola Cotticelli-Kurras, deserves to be mentioned first, not just for her painstaking mentoring and assistance, but also for her unvaluable friendship: a Marie Skłodowska-Curie fellowship is also about learning and training, and thanks to her I learned more than I could have hoped for. I am also indebted to Giorgio Graffi and Alfredo Rizza, who took the time to discuss with me several aspects of the data I collected and of the analyses I produced. I thank Michael Frotscher, Roberta Meneghel and Stella Merlin for discussing with me many linguistic and metalinguistic issues, and Chiara Melloni for her bibliographic suggestions.

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this work would not have been possible. I am also grateful to Zsolt Simon, who read and commented a more advanced version of the drafts, providing me with comments and advice, to Valerio Pisaniello, who helped me checking the glossaries, and to the editorial board of the series *Texte der Hethiter*.

Obviously, the usual disclaimer applies: while I am deeply indebted to those who kindly assisted me during the preparation of this book, the responsibility for its contents, including any shortcomings, belongs entirely to me.

Federico Giusfredi

# Abbreviations for morphosyntactic and part-of-speech glossing

## Morphosyntactic glossing

1	first person
2	second person
3	third person
A/I	ablative-instrumental
ACC	accusative
ALL	allative
COMP	complementizer
CONJ	conjunctive
DAT	dative
D/L	dative/locative
ERG	ergative
GEN	genitive
IMP	imperative
INF	infinitive
INSTR	instrumental
INTR	introductory element / “connective”
MP	medio-passive
N/A	nominative-accusative neuter
NEG	negation, negative, also prohibitive
NOM	nominative
OBJ	object
PL	plural
PRG	progressive
PRS	present
PST	past
PTCL	particle
PTCP	participle
QUOT	quotative
REFL	reflexive
REL	relative

SBJ	subject
SG	singular
SUP	supine
VOC	vocative

## Parts of Speech and Phrases

Adj	adjective
AdjP	adjectival phrase
Adv	adverbial
AdvP	adverbial phrase
C	complementizer
CP	complementizer phrase
$e_{(X)}$	empty, left empty after movement of X
FinP	finiteness phrase
ForceP	force phrase
N	noun
NP	noun phrase
Num	numeral
NumP	numeral phrase (= QP?)
D	determiner
Dem	demonstrative
DemP	demonstrative phrase
DP	determiner phrase
IP	inflected phrase
P	postposition
Poss	possessive
PossP	possessive phrase
PP	postpositional phrase (occasionally: prepositional phrase)
Q	quantifier
QP	quantifier phrase
TP	tense phrase
V	verb; v light verb
vP/VP	verbal phrase

# Chapter 1 - Luwian and the Anatolian Languages

## §1. Luwian and the Luwians: a short overview

Luwian is the name we give to the ancient Anatolian Indo-European language of one population of pre-classical Anatolia that was settled in the western areas of the region and in the southern ones, including Cilicia and Syria. The chronological boundaries of the history of the Luwian language are quite well defined, thanks to a significant amount of historical data that we possess regarding the neighbouring civilizations of the Hittites and Hurrians during the 2nd millennium BCE, and of the Assyrians, Aramaeans, Urartians and Phoenicians during the 1st. The earliest references to the Luwian peoples in Old Hittite texts, possibly predated by a few personal names and loans in Old Assyrian sources,<sup>1</sup> represent the beginning. The Neo-Assyrian conquest of Northern Syria and Southern Anatolia (between the 740s and the mid 7<sup>th</sup> century BCE), which was matched, to the West, by the emergence of the Phrygian Kingdom, represents the end. However, the pre- and protohistory of the Luwian peoples is quite obscure, and this problem is related to the question regarding the Indo-European migration(s) and movements in Anatolia. As a matter of fact, internal evidence from historical times is unable to provide any reliable clues regarding the protohistorical phases. Prehistory lacks written sources by definition. A linguist may, at best, speculate on the linguistic prehistory; however, Melchert (2003, 23ff.) convincingly argued that the hypothesis of a presence of Proto-Indo-European (and then Proto-Anatolian) peoples in Anatolia ever since the 8th millennium BCE (cf. C. Renfrew 1990) is not supported by reconstructable linguistic evidence.

If one emerges from the fogs of archaeolinguistics, moves a bit forward in time and limits the scope to the historical phases of Anatolian history,

<sup>1</sup> Cf. I. Yakubovich 2010, 2ff.



changes. Hittite, apparently, never became the main vernacular outside of Hatti. Luwian, on the contrary, regardless of its precise geographic origin inside Anatolia, seems to have spread to several regions, reaching the core of the Hittite Empire *at least* during the so-called Late Hittite phase (14th to 13th century BCE, if not earlier), when it *de facto* became a second language of the Kingdom of Hattuša.<sup>2</sup> Officials and people bearing Luwian names are quoted in the Hittite texts, whereas morphological and lexical forms of Luwian influence emerge from the late phases of the Hittite language due to the western campaigns at the end of the Middle Hittite phase.<sup>3</sup> Luwian was even adopted, along with its dedicated hieroglyphic script, in order to compose the monumental inscriptions of the Hittite Emperors, starting from the 14th century BCE. The status of Luwian under the Hittite Empire was that of a widespread language, which was associated with a script (the hieroglyphic one) employed for displaying visual propaganda. It was probably, to a limited extent, mutually understandable with Late Hittite, but there is no compelling evidence pointing to the fact that it ever became an official language of administration in Hattuša.

A reader may, by now, be ready to ask a reasonable question: that is, does everything we know about Luwian and the Luwians actually derive from Hittite archives and Hittite documentation? As a matter of fact, with regard to the Bronze Age, the answer is positive. As far as the linguistic evidence is concerned, Bronze Age Luwian is exclusively attested in documents that are, in one way or another, related to the scribal practice of the Hittite Empire. Cuneiform Luwian texts are only present in the Hittite archives, although they testify to the existence of at least three separate varieties of Luwian (see Yakubovich 2010; cf. also §2.). The only documents that may have been composed by a Luwian scribal office are two El Amarna Letters (EA 31 and EA 32, CTH 141–142), which were part of a series of correspondence between the Egyptian pharaoh and the king of the western state of Arzawa. However, the texts were not composed in Luwian, but in Hittite.<sup>4</sup> As for hieroglyphic Luwian texts (excluding seals that bear just a few signs),

<sup>2</sup> Cf. Melchert 2005, van den Hout 2006 and Rieken 2006.

<sup>3</sup> On the late Middle Hittite phase and the transition to the Imperial phase; cf. in general Bryce 2007, 121-188.

<sup>4</sup> Cf. Hoffner 2009, 269-277, for text and historical commentary.

those that date back to the Bronze Age mostly contain highly logographic royal inscriptions by the Great Kings of Hatti.

After the fall of the Hittite Empire around 1200 BCE, the situation changed quite radically. The Post-Hittite rulers of former Hittite vice royalties in Syria and Anatolia (e.g. Karkemiš, Aleppo, Tarhuntassa) kept the tradition of monumental Hieroglyphic inscriptions alive. Furthermore, after the documentary gap of the Dark Age (around 1200–1100 BCE), several local small states and city-states emerged, which the modern scholars have conventionally labelled “Neo-Hittite States”, even though the Hittite language had already become extinct at that stage.<sup>5</sup>

The history and culture of the Neo-Hittite states were rich and complex, characterized by the coexistence of different factors, including the preservation of an Anatolian cultural tradition and the innovative interaction with the surrounding non-Anatolian cultures of Syria. Still, for the purpose of the present book, it will be enough to provide some general data. The historical parabola of the Iron age Luwian States ranged from the eleventh to the eighth/seventh century BCE. The territories they occupied covered central Syria (the southernmost being the mostly Aramaean city-state of Hama), northern Syria (with the all-important centres of Karkemiš and Aleppo, and the recently discovered and still mysterious early Iron Age kingdom of *Palastin/Walastin*),<sup>6</sup> the bilingual Luwo-Phoenician region of Cilicia (with the crucially important site of Karatepe), and part of Central Anatolia (with the several kingdoms into which the region referred to as *Tabal* by the Assyrians was divided).<sup>7</sup>

Linguistically, it is hardly conceivable that all those small territorial states shared the same variety of Luwian, let alone the same syllabary derived from the Bronze Age hieroglyphic script of the Hittite imperial royal inscriptions. Nevertheless, the expected differences hardly emerge from the texts. The hieroglyphic Luwian corpus of the Iron Age, most of which was published by J.D. Hawkins in 2000, consists of over 300

<sup>5</sup> On the history and culture of the so-called Neo-Hittite states, see Jasink 1995; Melchert, ed. 2003; Giusfredi 2010 (Chapter 2); cf. also Bryce 2012 and the review by Giusfredi 2014.

<sup>6</sup> On the Kingdom of Palastin/Walastin see Hawkins 2009; Harrison 2009a and 2009b; Dinçol et al. 2015.

<sup>7</sup> On *Tabal* cf. Hawkins 2000, 424ff.; Giusfredi 2010, 50ff.; Bryce 2011, 141ff., 306f. On the main sources cf. also D’Alfonso 2012, 174f.

inscriptions of various lengths, which, with very few exceptions,<sup>8</sup> seem to share a very similar syllabary and very similar phonographic rules. Possibly, the Luwian states of the Iron Age formed some kind of cultural *koinè*, which may very well explain why, contrary to the Aramaean and Chaldean states of the early Iron Age, they seem to have resisted the penetration of the Mesopotamian scribal culture(s), to the point that, to date, no single cuneiform tablet has been located in the Neo-Hittite levels of any of the Syrian and Anatolian sites which have been surveyed and/or excavated.

## §2. Indo-European, Anatolian and the “Luwic” languages

If the historical and geographic framework of the Luwian language is defined by the chronological coordinates of the history of Luwian proper, it is also defined by the boundaries of the neighbouring civilizations of which we are most historically familiar (Hittites, Assyrians, Hurrians). Furthermore, like any language in the world Luwian also fits a genealogic taxonomy, which is particularly relevant and worth mentioning, because subsequent members of the ancient Anatolian language family will complete this contextual sketch of the “biography” of the Luwian language (in §2.2.).

### §2.1. Proto-Indo-European and Proto-Anatolian

At the upper level of the phylogenetic tree of the Anatolian languages, the root position is occupied by Proto-Anatolian. It connects to a larger protolanguage, which is traditionally called early Proto-Indo-European, or, in a competing terminology, Proto-Indo-Hittite (cf. Figure 2). From this protolanguage would derive, on the one hand, Proto-Anatolian, and on the other hand Proto-Indo-European, with its different phases and with all the historical languages that will separate from it at given stages.

<sup>8</sup> Peculiar syllabaries were used, for instance, for the TOPADA and SUVASA Iron Age inscriptions, on which see Hawkins 2000, 451ff., for edition, historical commentary and palaeographic discussion.

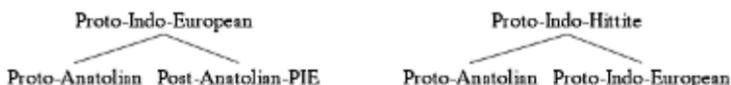


Figure 2: Relationship of Proto-Anatolian to Proto-Indo-European according to a traditional representation and to the Indo-Hittite hypothesis.

The reasons for supporting either an Indo-Hittite hypothesis or an Indo-European one will not be discussed here. All in all, calling the protolanguage “Indo-Hittite” or considering it to be the earliest stage of Indo-European is mostly a problem of terminology: what counts, for the purpose of this general taxonomy, is the existence of a consistent Anatolian subfamily, which represents a very archaic stage in the development of the whole language-family. Given the irrelevance of this problem for the purpose of the present study, the traditional label “Indo-European” will be employed here to refer to the family to which Anatolian belonged.

### §2.2. The Anatolian group

Moving down the branches of the phylogenetic tree, while focusing on the Anatolian group proper, there exist several different hypotheses for the exact filiation of the single idioms, which are historically attested.<sup>9</sup> A relatively safe representation is the one depicted in the following scheme:

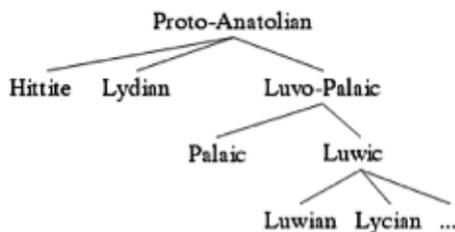


Figure 3: Internal filiation of Anatolian according the Luvo-Palaic hypothesis

<sup>9</sup> See Oettinger 1978 for a first study; recently Carruba 2011 and Melchert in press, with reference to previous scholarship.

This filiation tree subsumes the so-called Luvo-Palaic hypothesis, which assumes that, given a set of features shared by the Luwic languages and Palaic, but not by Hittite (and, according to the current level of understanding, Lydian), the two idioms would have separated together from Proto-Anatolian. The arguments in support of this theory appear to be very strong, in particular the common Luvo-Palaic feature of the first person preterite in *-ha* (instead of *\*(o)m > -un* of Hittite and *-v* (or sim.) of Lydian). Whether the form is innovative or more archaic is still debatable, although it certainly derives from a *h<sub>2</sub>*-series, which is associated, for instance, with the endings selected by the Greek (reduplicated) perfect.<sup>10</sup>

The relative chronology of the separation of the Anatolian languages and subgroups from Proto-Anatolian is a very complex problem, such that the scholars are currently some distance from reaching a wide consensus. However, a few unquestionable macro-patterns emerge:

- Both Luwic and Palaic seem to have a simpler verbal system, compared with Hittite, without the complete expansion of the *h<sub>2</sub>*-series of endings to the whole system of the present active;
- Luwian and Palaic maintain(?) an *-mma/i-* participle, which is not present in Hittite (innovation of Luvo-Palaic or loss of a category in Hittite?);<sup>11</sup>
- Syntactically, most, if not all, of the known subordinating elements of Luwian derive from a labiovelar series *k<sup>w</sup>-*, with some of them behaving as *in situ wh*-elements, which may reflect an archaic system within the Indo-Hittite/European framework;
- Our knowledge of Lydian is not good enough to allow for a precise assessment of its position (but cf. Giusfredi 2017a for a brief discussion; also Rieken in press).

All in all, the attested situation does indeed point to an archaicity of the Luvo-Palaic branch, as well as to the relative seriority of the Hittite branch; however, this assessment is and remains speculative.

<sup>10</sup> So Kloekhorst 2008, 136ff.. Cf. also in general Cowgill 1979, Eichner 1975, Jasanoff 1979 and 2003; also Melchert 2013 for Hittite; Vernet-Pons 2015 for Luwic.

<sup>11</sup> Cf. Giusfredi 2017a; Melchert 2014, 206-207 considers these forms a Luvo-Lycian innovation.

### §2.3. The internal filiation of Luwian

Moving onto the internal filiation of the Luwian language, *at least* three distinct varieties of the language have been identified for the Bronze Age (Yakubovich 2010):<sup>12</sup>

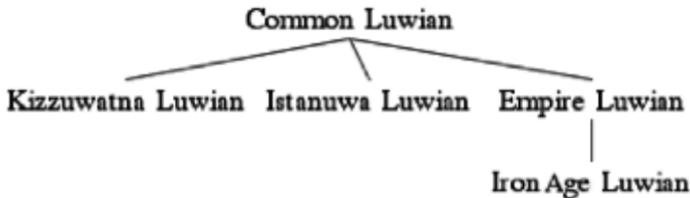


Figure 4: The varieties of Luwian.

From a reconstructed “Common Luwian” phase, at least three distinct branches can be derived. Istanuwa-Luwian – Istanuwa was a city probably located at the boundaries between Hatti and the western Kingdom of Arzawa – is little more than a ghostly trace: it is attested with certainty only in sentences that represented the titles of Luwian compositions as mentioned in the fifteenth century cuneiform Hittite text (the so-called “The Songs of Istanuwa”). This variety differs from the other ones because of the traces of a few morphological peculiarities (Yakubovich 2010) and of the very limited (if any) influence of a Hurrian cultural and linguistic interference. Another possible variety of Western Luwian may be represented in the Luwian passages of the so-called “Songs of Lallupiya”, but there are no compelling elements on which one can base a distinction opposing it to the Istanuwa variety.

Kizzuwatna-Luwian is the language of the Cilician rituals. Some of the ritual texts from the area belong to a Hurro-Luwian tradition and are written in Luwian, others are written in Hittite, although they probably belong to the same cultural and religious tradition.<sup>13</sup> Kizzuwatna-

<sup>12</sup> Mouton and Yakubovich, *pers. comm.*, suggest the existence of other varieties, thus restricting the corpus of proper Kizzuwatna-Luwian. For simplicity, I will maintain the original distinction.

<sup>13</sup> On the complex intertwined relationship between the Hittite and the Luwian culture, see, in general, the studies collected in Mouton, Rutherford and Yakubovich (eds.) 2013.

Luwian is the most attested variety in the Bronze Age cuneiform Luwian corpus by number of texts. It shows traces of a possible influence of Hurrian, not just culturally and lexically, but also on the level of morphosyntax. The most significant one, as identified by Yakubovich (2010), is the agglutinative-like plural inflection of the derivational base-noun in the genitival adjectives, which could depend on the influence of the agglutinative mechanics of the so-called *Suffixaufnahme* in Hurrian.<sup>14</sup> In general, the overwhelming diffusion of genitival adjectivization as a way of marking possession in Kizzuwatna-Luwian, matched by a virtual absence of the inflectional genitives, which seem to exist in Empire and Iron Age hieroglyphic Luwian, may depend on the contact with Hurrian, since the other main language of the Anatolian Bronze Age, Hittite, had a nominal paradigm similar to that of Luwian (including some ambiguities as far as *a*-themed nominatives and genitives are concerned), but did not resort to this kind of strategy (cf. also Bauer 2014; Giusfredi 2015). Apart from this morphosyntactic opposition, Kizzuwatna-Luwian had some peculiarities on the morphological level, too. In general, the pattern of the plural nominal inflection (see below, §4.) seems to be closer to a reconstructed Common Luwian one. Following the innovative formation of a nominative plural in *-nzi* built on the accusative plural *-nz*, only Kizzuwatna Luwian retained the latter, while Empire and Iron Age Luwian generalized *-nzi* to both cases.

The last variety of Luwian is what Yakubovich (2010) refers to as “Empire Luwian”. This variety is attested both in sporadic and sparse occurrences in cuneiform texts from Hatti (occasionally marked as foreign words by gloss-wedges) and in hieroglyphic inscriptions, which, after the end of the Hittite Empire, survived the generalized crisis of 12<sup>th</sup> century BCE and were still composed during the first centuries of the Syrian and Anatolian Iron Age. Methodologically, Empire Luwian appears to be mostly characterized by the absence of the morphological and morpho-syntactic peculiarities of Kizzuwatna-Luwian. Its exact genesis, that is, whether it was a specific variety of Luwian or the product of the coexistence of invisible varieties in the environment of the Late Hittite scribal administration, is impossible to assess (cf.

<sup>14</sup> But cf. also Simon 2016 for a different interpretation.

Yakubovich 2010, 68ff., for the hypothesis that the Empire and the Iron age varieties represent examples of linguistic *koiné*).

The three known varieties of Luwian differ from each other mostly on the level of morphology, while the consequences of these differences on the syntactic structure of the language are quite limited. Contact, however, does play a role in the emergence of new categories, which, in due turn, can interfere with phrasal patterns. Furthermore, even within specific varieties of the language, specific sub-areas may exhibit peculiar features, given the geographic and historical environment. An example of importance is represented by the Iron Age texts from bilingual Cilicia, where the Semitic and Phoenician elements strongly influenced the Luwian that was written on the monumental inscriptions. Here, the general order of constituents, phrases and sentences definitely seems to follow patterns that are not the same as in other areas of the Iron Age Luwian areas.<sup>15</sup>

In the present work, both cuneiform and hieroglyphic Luwian texts will be taken into consideration, in order to attempt to sketch a general description of the syntax of the Luwian language. As far as cuneiform Luwian is concerned, text samples will derive from all known varieties and with the label “cuneiform Luwian” quite frequently used as a general definition. This, however, will happen as a rule only in those cases in which the patterns under discussion will not be related to a peculiarity of a single variety: whenever the exact position of a text needs to be matched against the filiation of Luwian in historical times, more precise labels will be employed and duly discussed.

### §3. The scripts and the corpus

While the recognition of the different varieties of Luwian in the Bronze Age is recent, the main graphemic subdivision of the Luwian corpus was already evident as soon as the Iron Age hieroglyphic texts turned out to be written in Luwian and not in Hittite.<sup>16</sup> The graphemic taxonomy of

<sup>15</sup> Cf. Yakubovich 2015 for a discussion of the unusual syntactic patterns in Iron age Cilician Luwian.

<sup>16</sup> Without entering into the details about the long history of study on the Anatolian hieroglyphic script, the definitive proof that Luwian was the

Luwian elicited a discussion on whether or not the language of the hieroglyphic inscriptions and the language of the cuneiform texts were exactly the same. Nowadays, cuneiform Luwian is used as an umbrella term referring to the “dialects”, or varieties, discussed above; hieroglyphic Luwian, on the other hand, is seemingly rather homogeneous. The possibility of identifying linguistic differences between the imperial inscriptions of the Bronze Age and the texts of the so-called Neo-Hittite states is considerably hindered by the fact that the hieroglyphic texts of the Hittite Great Kings are highly logographic, while the words that are syllabically written are limited in number.

Far from perfectly matching a significant distinction in terms of language varieties, separating the cuneiform and the hieroglyphic Luwian corpora is important, given that one must never forget that all Anatolian languages are *text-languages*, which have only survived in the form of written records. No modern language exists that is genetically close enough to them in order to allow for a reliable comparison. Therefore, in order to introduce the corpus under investigation, the writing systems need to be briefly discussed.

### §3.1. The Anatolian cuneiform script and Luwian

The Anatolian cuneiform script is a mixed logo-syllabic system, which the Hittites inherited from the neighbouring Mesopotamian cultures. It was originally developed by the Sumerians towards the end of the fourth century BCE. Sumerian cuneiform went through an early pictographic phase, which gradually mutated and, based on a high degree of “morphography”, triggered by the agglutinative morphology of Sumerian, it was an easy target for the first syllabographic adaptation in the framework of the East Semitic Akkadian environment, towards the second half of the third millennium BCE. As was the case with most anthropic matters, a complete shift towards phonography never took place. Akkadians, Babylonians and Assyrians maintained a large vocabulary of logograms, which were combined with syllabograms in a predominantly linear manner.

language that they encoded was given by Hawkins, Neumann and Morpurgo Davies (1972). In earlier literature, references to “Hittite hieroglyphs” or similar labels were still common (cf. e.g. Meriggi 1966-1975).

While it is uncertain by which exact route Akkadian cuneiform entered Hittite Anatolia,<sup>17</sup> the script adopted by the Hittites is structurally similar to the Semitic cuneiform script(s), with a combination of syllabic signs and logograms. That said, the Hittite syllabary was decidedly simplified and reduced, with fewer syllabic variants of the phonographic elements.<sup>18</sup>

The Luwian texts written in Cuneiform were generally written in Hattuša, no matter which specific variety of the language they matched and which cultural environment they belonged to. Therefore, the graphemic rules and styles that applied to Hittite also applied to Luwian. These include the orthographic rendering of the *lenis/fortis* consonant opposition according to Sturtevant law,<sup>19</sup> and the tendencies towards noting a *plene* writing of vowels in given prosodic environments. From the very perspective of syntactic theory, Hittite cuneiform is a very friendly script: the order is almost entirely linear and the subdivision of words is typically neatly rendered, while the amount of bare, non-complemented logograms employed was generally not high enough to prevent an evaluation of word order, agreement and alignment.

### §3.2. The Anatolian hieroglyphs

The other script employed for recording the Luwian language was the Anatolian hieroglyphic script. As previously stated, it was used both during the Bronze Age by the last Great Kings of Hatti and during the Iron Age by the rulers of the Luwian political formations in Anatolia and Syria.

The origin of the Anatolian hieroglyphic script has been debated. Yakubovich (2008), following previous observations made by other scholars (e.g., Marazzi 1990; Mora 1995; Coticelli-Kurras 2001) and basing his own conclusions on the mixed Luwo-Hittite acrophonic development of syllabic values, hypothesizes a full development of the script in a mixed Luwian and Hittite environment, which he identifies as the Hittite capital city of the late 15th or early 14th century BCE. This is

<sup>17</sup> For a recent study on this issue, see Weeden 2011, 1ff.. Cf. also Coticelli-Kurras and Giusfredi 2017.

<sup>18</sup> The standard syllabary of Cuneiform Hittite is Rüter and Neu 1989.

<sup>19</sup> Geminated consonants represent a fortis/unvoiced stop, while ungeminated consonants represent a lenis/voiced stop (Sturtevant 1932); for recent discussion and different proposals cf. also Pozza 2011 and Kloekhorst 2014.

not the place for entering into the details regarding this discussion (on which cf. Payne 2015); however, even after the critical re-evaluation and reduction of the number of Hittite acrophonic values in the hieroglyphic syllabary by Oreshko (2013), a Hittite contribution to the full development of the script still seems to have played a role.

The highly critical attitude taken by Waal (2013, 306), who rephrases and questions Yakubovich's hypothesis as "the idea of inventing a completely new writing system in order to resolve the ambiguity of the cuneiform script on the periphery of seals", could possibly be mediated by a more moderate approach to the subject under discussion. It is a fact that a Hittite contribution existed in relation to the *full* development of the script, which was by no means the product of an autonomous and extra-Hittite Luwian civilization (or cultural group); on the other hand, there is absolutely no reason to deny that the script slowly developed from an earlier and highly logographic phase. As far as this early phase is concerned, however, scholars may wish to exercise great caution when comparing other Mediterranean hieroglyphic systems: the Egyptian system seems to share only a few apparent features with the Anatolian one (e.g. the use of determinatives before verbs), while the Cretan system, dating back to the Middle Minoan phases I and II and improperly described by Waal as "pictographic",<sup>20</sup> actually involves a large number of syllabograms (96 pure syllabograms versus 23 pure logograms according to the inventories in Olivier and Godard 1996 and Younger 1999), a situation unattested for the putative earliest phases of the development of the Anatolian hieroglyphic script.

Whatever the exact origin of the writing system, its structure is different from the Cuneiform one; indeed, to some extent, it has been described as somewhat defective. It only admits V and C(V) signs, writing a syllable (for instance *sa*, *ni* or *tu*) and, for all CA and most CI signs, also the single consonant (for instance, the endings *-s*, or *-n* of the nominal

<sup>20</sup> A "pictogram" is a sign that graphically resembles an instance of the object its content level points to. Graphematically, it is identical to a logogram, although this does not require the sign to actually "draw" the object of reference. Both concepts are opposed to phonograms: signs that represent elements of the presemiotic articulation channel (syllables, consonants, or phonemes). In general, the distinction between a logogram and a pictogram is irrelevant for the purpose of the graphematic description of a writing system.

inflection). A few apparent polyconsonantal signs exist: *kwa/i* and *hwa/i* going back to the labiovelar series of Indo-European, and signs involving a rhotic like *kar*, *tar(a/i)*, possibly derived from a standardized combination with the “graphematically clitic” sign *-ra/i*, which only occurs when attached to another sign. The phonographic suboptimality of this writing system (which does not allow for certain consonantal combinations that are typical of most Indo-European languages, and is slightly less ductile than cuneiform) is in part due to our convention of rendering the sign with a standard transcription. All in all, evaluating the optimality of a script should be a matter of measuring its success in space and time, as well as its effectiveness in fulfilling the needs of the cultures that used it.

However, it is true that, in some cases, the hieroglyphic script can be rather ambiguous, while the normalization of words and strings is certainly open to interpretation. Whether the sequence *tara/i-wa/i-ni-sa* is to be read */tarwanis/* (as per the etymology presented by Giusfredi 2009), */tarrawannis/* (as currently read, for instance, by Melchert 2019 and by Yakubovich’s online corpus <http://web-corpora.net/LuwianCorpus/search/>),<sup>21</sup> or even */trwanis/* or */trawanis/*, is impossible to discover when only relying on the script.

### §3.3. The graphemic suboptimality of the hieroglyphic script

Of course, the issues introduced at the end of the paragraph above are largely a matter of convention or depend on etymologies that are hardly relevant to a study on the syntax of the Luwian language. On the other hand, it is important to highlight that, in some cases, the putative suboptimality of the script may have an impact on the subject of the present study. Indeed, unclear sequences in the segmental areas of themes or endings combined with logographic and rebus writings, not to mention the cases in which endings were simply neglected, may prevent a clear recognition of inflected forms and, therefore, of the patterns of agreement. Specific graphic conventions also existed, the most important of which was the so-called “initial-*a*-final”, a praxis by which an initial [a] was written at the end of a word (*mi-sa-a* for */amis/*, “my”), that also affected clause-initial chains composed by the “connective” *a*- and a string of clitics (*mu-wa-a* for */a=wa=mu/*). In later texts, the initial

<sup>21</sup> Data retrieved in January 2018.

*a-* could also be completely omitted; cf. §3.5. below for the conventional bound transcriptions that will be adopted in these cases.

Furthermore, it needs to be duly stressed that while the order of reading of the Anatolian cuneiform script is linear, moving from left to right and with lines organized in top-down order, as in modern English, the hieroglyphic script has a variable order of reading, which is generally linear, but features a left-to-right or right-to-left variable order, with frequent cases of boustrophedon. Even more relevant, the words can be written horizontally and vertically at the same time with the horizontal order corresponding to the direction of the line and the vertical one moving from the top to the bottom. Although, in the vast majority of cases, the order of the words in a sentence is clearly defined, doubts may sometimes exist regarding the precedence of one word or the other. This would obviously prevent a clear assessment of the syntactic structure of the passage.

In order to maintain a systematic approach to the problems under investigation, the graphematic and the epigraphic ambiguities of the hieroglyphic writing system will be discussed whenever relevant to the discussion or interpretation of a syntactic phenomenon or the prevalence thereof.

### §3.4. The scripts and the corpus

While the distinction between the cuneiform and the hieroglyphic Luwian does not exactly match the taxonomy of the Luwian varieties recognized so far, the structural peculiarities of the two scripts are not the only reason why the distinction is of relevance to any linguistic investigation. In fact, the distinction between the two corpora also depends on the fact that the types of texts that are actually attested for the two scripts are very different, as outlined in the following table:

	<b>Cuneiform Corpus</b>	<b>Hieroglyphic Corpus</b>
Administrative / Economic		√
Building Inscription		√
Funerary Text		√
Historical Text		√

Letter	(?) <sup>22</sup>	✓
Myth	✓	
Ritual	✓	
Royal Dedication		✓

*Table 1: The main types of texts matched against the two Luwian writing systems*

This diversification in terms of textual types has an impact on corpus linguistics: it is much simpler to compare the cuneiform texts with each other (and to identify, for instance, a Kizzuwatna variety as opposed to an Empire one) than the hieroglyphic corpus with any subgroup of the cuneiform one.

The very vocabulary of most cuneiform Luwian texts is apparently rather typical of ritual speech and mythological narratives, while the vocabulary of the hieroglyphic historical, funerary or epistolary texts is much richer. Apart from lexicon, style and rhetoric also play important roles in defining the superficial appearance of a text-language: the language of most – if not all – cuneiform Luwian texts is rhetorically charged, and word-order is more frequently marked than it is in the generally “more prosaic” hieroglyphic non-religious texts. Since we do not know exactly what kind of metrics and rhetorical figures were employed in Anatolian, it is difficult to recognize the impact of text stylistics.

Why this is relevant to a study of syntax is probably evident, but it can be exemplified by discussing the prevalence of clause-initial verbs or verbal phrases (vPs/VPs), followed by accusative arguments in the cuneiform and hieroglyphic corpora. If the only criterion applied is the absolute position of the finite predicate in the linear structure of the clause, one can identify a dozen cases in the hieroglyphic texts.<sup>23</sup> In the cuneiform Luwian corpus, on the other hand, there are more than thirty. Now, while the cuneiform texts make up about 57% of the attested

<sup>22</sup> Cf. Starke 1985, 368f.

<sup>23</sup> Excluding the abnormal constructions in the bilingual Luwo-Phoenician inscriptions from Cilicia; cf. Yakubovich 2015; Cotticelli and Giusfredi 2018.

documents, several of them are rather short, while some texts run parallel or are exact duplicates of others. Iron Age Luwian inscriptions, on the other hand, are generally unique and can be significantly longer than the Bronze Age cuneiform tablets. The two corpora must be compared, keeping in mind that the hieroglyphic one is richer in terms of variety and the number of words. Therefore, the prevalence under discussion may point to a stronger tendency of Bronze Age cuneiform Luwian towards verb movement and post-verbal object position. Nevertheless, many instances of verbal fronting in the cuneiform Luwian corpus feature an accumulation of lists of coordinated nominals in the right periphery, as in the case of the ritual KUB 35, 45 iii 17ff. (Kizzuwatna Luwian):

- [1] *mammalwai*                    -*an*            EN.SÍSKUR-*is*  
 crush.PRS3SG                he.ACC     ritual-lord.NOM.SG  
*adduwalin* EME-*in*  
 evil.ACC.SG tongue.ACC.SG  
*tatariyammanassin* *hirutassin*  
 slander.of.ACC.SG    curse.of.ACC.SG  
*assiwantattanassin*   *maiyassin*                EME-*in*  
 poverty.of.ACC.SG    multitude.of.ACC.SG tongue.ACC.SG  
 “The ritual-lord crushes it, the evil tongue, the slander’s curse,  
 the tongue of the multitude of the poor.”<sup>24</sup>

Here, a list (introduced by a cataphoric clitic pronoun) of accusatives occupies the *linear* right periphery of the sentence. This type of solution, in a ritual passage, could depend on a number of stylistic reasons, ranging from the mere listing of a series of *termini technici* of the performance to the need for rhetorically locating all the negative elements that are “crushed” by the beneficiary in a postverbal position for complying with a formulaic construction or even using some kind of rhyme. While the exact form of the cuneiform Luwian rhetoric and “poetics” remains largely obscure, this is an example in which the different prevalence of a syntactic configuration in the cuneiform and hieroglyphic sub-corpora probably depends on the peculiarities of the

<sup>24</sup> Starke 1985, 151ff. Text: [ma-am]-ma-al-wa-ya-an EN.SÍSKUR-iš ad-du-wa-li-in EME-in (18) [ta-a-]ta-ri-ya-am-ma-na-aš-ši-in hi-i-ru-ta-aš-ši-in (19) [a-aš-š]i-wa-an-ta-at-ta-na-aš-ši-in ma-a-i-ya-aš-ši-in EME-in.

types of texts involved (which also includes the possibility of foreign influence in case of translation texts).<sup>25</sup>

### §3.5. Transcriptions and conventions

In order to provide a suitable linguistic and syntactic commentary to the Luwian texts to be quoted, it will be necessary to provide them as a bound transcription, in glossed form, in philological transliteration and, occasionally, in annotated rendering of the phrase structure. Unless differently specified, Luwian sample texts discussed in the present monograph will be quoted in the following way:

[Nr.]	<i>zati</i>	<i>waniti</i>	(bound transcription)
	this.D/L.SG	stele.D/L .SG	(glossed annotation)
	“To this stele”		(translation)

Since the aim of the present work is to discuss syntax, there will be no attempt to enter the complex problem of Luwian reconstructed (morpho-)phonology. The purpose of bound transcription is to provide samples in which the boundaries of words and phrases are easier to spot and appear less confusing than in a sign-by-sign transliteration. In order to accomplish this, the criteria will be maintained as simple and as close as possible to the current understanding of the language, by:

1. Eliminating vowels when they are certainly only graphical (e.g., Kizzuwatna cuneiform Luwian accusative plural in  $^{\circ}$ -*in-za* normalized as  $^{\circ}$ -*inz*, hieroglyphic Luwian nominative and accusative endings  $^{\circ}$ -*sa* and  $^{\circ}$ -*na* normalized as  $^{\circ}$ -*s* and  $^{\circ}$ -*n*);
2. Forcing *i*-vocalism when the cuneiform <e>-signs are used to mark an [i], e.g., plural forms in  $^{\circ}$ -*en-zi* normalized as  $^{\circ}$ -*inzi*;
3. Maintaining the graphic notation of geminate and simple consonants as they appear in the cuneiform script (e.g.,  $^{\circ}$ -*at-ta*- and  $^{\circ}$ -*a-ta*- normalized as  $^{\circ}$ -*atta*- and  $^{\circ}$ -*ata*- respectively);
4. Integrating the omitted consonantal elements of Hieroglyphic Luwian (e.g.  $^{\circ}$ -*a-ta* for [anta] normalized as  $^{\circ}$ -*anta*). Brackets will be used when the interpretation of the word requiring a

<sup>25</sup> On the stylistic aspects of these Luwian documents, cf. the important contribution by Melchert 2006; however, on the peculiar word-order in translation texts and documents that were under the influence of Hurrian see also Rieken 2010.

consonantal restoration is uncertain, e.g., °-*a(n)ta*. This also applies to geminate (= *fortes* or unvoiced) consonants.

5. Noting the voiced consonant in Hieroglyphic Luwian only for the sign TÀ, which will be normalized as *-da-* (which after Rieken 2008 has become a widespread convention).
6. Noting the initial-*a*-final of hieroglyphic Luwian (a phonetically initial [a] that was conventionally written at the end of a sequence, as per Hawkins 2003) with a ★-star before the *a*-sign, e.g., ★*amu* ['amu] for *mu-a*. When, on the other hand, in texts later than the ninth century BCE the initial *a-* is graphically omitted (cf. Melchert 2010), it will be restored in round brackets in bound transcription: (*a*) (but this is a merely conventional notation adopted in this book, cf. below, Chapter 5, §3.2. for further discussion).

Regarding morphosyntactic glossing, the relevant information for each example will be provided using a simple notation based on the Leipzig Glossing Rules (see the list of abbreviations at the beginning of the book for further details). Translations are by the current author; whenever necessary, reference will be made to the previous literature in which relevant or problematic translations have been offered or discussed.

Since bound transcription is conventional and glossing is necessarily interpretive, for each example the philological transliteration of the text will be offered and will appear in a footnote at the end of the last line of the translation, containing a reference to the edition employed. The transliteration of cuneiform Luwian follows the rules generally employed for cuneiform Hittite (cf. the syllabary by Rüster and Neu 1989). The transliteration of hieroglyphic Luwian follows the rules employed by Hawkins (2000, with reference to the previous literature), albeit with a single difference: logograms transcribed with sign number will not be marked by a ★-star, but by Laroche's "L", in order to avoid any confusion with unattested or ungrammatical words and strings, which, following the standard praxis of general linguistics, will be marked by a star (\*). The logogram no. 77, indicating the verb "to pledge", will therefore be noted as L77, while an unattested/ungrammatical sequence, e.g., a clitic series \**a-pa-mu-ta*, will be marked by a star (\*).

#### §4. Brief overview of Luwian grammar

Before discussing its syntax, it is necessary to provide an overview of the general grammar of Luwian. While Luwian was virtually deciphered shortly after World War II, thanks to the important role played by the Luwo-Phoenician bilingual of KARATEPE 1, most grammatical descriptions of the language are quite recent.<sup>26</sup> The first systematic grammars by Melchert and Plöchl appeared in 2003. Melchert's description (2003) is a short, but detailed, chapter included in the miscellaneous volume *The Luwians*, a book that marked the beginning of a new phase of research on the Luwian people(s), culture, history and language. Plöchl's grammar (2003) is a descriptive monograph and, to date, it represents the most comprehensive attempt at a description of the Luwian language. More recently, Payne (2010) published her *Hieroglyphic Luwian*, a textbook for introductory teaching at an early university level. While Melchert's and Plöchl's grammars are technical works in linguistics, and reflect the advanced views of the two authors, Payne's book is a useful introduction, although the linguistic jargon is not impeccable (cf. the review by Giusfredi 2012). In 2015, an overview of Luwian grammar was published by Ilya Yakubovich (2015b), containing the most updated description of the language to date.

However, opening her monograph on the morphosyntax of the Luwian noun phrase (NP), instead of picking a reference work, Bauer (2014, Chapter 1) chose to provide her own outline of a grammatical overview. Since the interpretation of some minor problems may vary significantly in the different sets of grammar, a brief overview will be provided on the way in which the language under investigation worked, leaving aside, of course, the discussion of its syntactic structures, which will be the central topic of the rest of this monograph.

##### §4.1. Phonology

The Luwian phonemic inventory has been investigated by Melchert (1994) and, while more recently several studies have cast light on the exact correspondences between graphemes and specific sounds, not much has changed with regard to the synchronic table. The main

<sup>26</sup> An early grammar, however, deserves to be quoted, that is, Meriggi's handbook (1966-1975).

distinctive traits are the usual ones: place of articulation, mode of articulation and sonority; on the other hand, given both the problem of the exact interpretation of Sturtevant’s law (1932) and the long-running discussion on the actual type of sonority opposition that existed in Indo-European (cf. Kloekhorst 2014), the jargon of choice will distinguish between *lenis* and *fortis*, rather than between *voiced* and *unvoiced*. The following table contains a simplified and conventional representation of the consonantal sounds of Luwian.

	Place	Dental/coronal		Labial		Velar		Labiovelar		Palatal
Mode	Sonority	Fortis	Lenis	F	L	F	L	F	L	-
Stop		t(t) <sup>27</sup>	d/t	p(p)	b/p	k(k)	g/k	k(k)w	gw/kw	
Fricative		s(s)	s(?)			h(h)	h	h(h)w	hw	
Affricate		z(z)	z(?)							
Nasal		n		m						
Lateral		l								
Trill		r								
Glide				w						y

Table 2: The conventional Luwian consonantal system employed in this book

Apart from the problem of sonority, the exact phonetic interpretation of a *fortis* fricative ([hh]) and of a *lenis* fricative ([h]) is far from certain,<sup>28</sup> even though a phonemic opposition going back to Proto-Anatolian must be assumed.<sup>29</sup> As for the other fricatives, hypothesizing the existence of an opposition between voiced *s* ([z]) and unvoiced *ss* ([s]) is not motivated by any synchronic or diachronic evidence in the sources (although the geminate and single notations are certainly functionally opposed). The notations of affricates *z* and *zz* are probably the result of a

<sup>27</sup> Gemination will be indicated in brackets, as it may simply reflect fortition; furthermore, it is not marked in hieroglyphic Luwian.

<sup>28</sup> Cf. Simon 2014 for a discussion and for the hypothesis of a positive solution of this issue.

<sup>29</sup> Melchert 1994, 53ff., 63ff.

distinction in length or intensity, while the IPA rendering should probably be [ts] and [ts:] (there are no apparent reasons for reconstructing an opposition with a putative [dz]). The opposition between *fortis* and *lenis* seems to be only to be relevant in the intervocalic position; on the other hand, any conclusion about this evidence would be circular: the writing systems do not allow for the notation of a C<sub>1</sub>C<sub>1</sub>C<sub>2</sub> group.

Regarding vowels, neither writing system used for Luvian does suggest the presence of an [e] phoneme (although in cuneiform some *e*-signs were sporadically used to write [i], while in some loans, e.g., the name of the Mesopotamian god Ea, the vowel was certainly real). As for the existence of an Anatolian [o], now proven by positive examples of contrast, the problem is complex and, since it is generally irrelevant for the study of syntax, it shall not be discussed in the present work. All in all, a merely conventional three-vowel system, with a distinction between long and short vowels, is sufficient for the purpose of the present investigation:

	front	central	Back
Close	i, i:		u, u:
Open		a, a:	

Table 3: The ‘conventional’ Luvian vowel system (note that o and o: also existed in Anatolian)

Diachronic sound changes may produce stable alternations within the paradigmatic distribution of derivational and inflectional morphologies. Thus, the rules of lenition, turning a *fortis* consonant into a *lenis* after an accented long vowel or between unaccented vowels may result in different verbal endings for the third person singular present: *-ti* after a long accented thematic vowel, *-tti* after an unaccented long vowel or after a short vowel, e.g. *a-ú-i-ti* (/a'wi:-ti/) “he comes” versus *a-ri-it-ti* (/a'riya-ti/ > /a'riya-tti/ > /a'ri:-tti/) “he raises, lifts”. Of course, these alternations are produced diachronically. Synchronically, in some cases an analogical levelling of paradigms may have occurred, but this is hard to investigate, since Sturtevant’s law is not applied to the hieroglyphic writing system that was used to record the last and most recent phases of the language.

An important diachronic sound change, which was at work during the historical development of Luwian, is rhotacism: it occurs intervocally and affects dental lenes:  $VTV$  (or  $VDV$ ) >  $VRV$ . This phenomenon may belong to a larger set of changes, which regard the flapping and at least the partial neutralization of lenis coronal stop, rhotic and lateral consonants and, possibly, the nasal coronal. This is also reflected in the multiple values of the pair of signs formerly transcribed as  $TA_4$  and  $TA_5$ , which are now recognized as indicating flapping sounds and conventionally transcribed as  $la/i$  and  $lá/i$ .<sup>30</sup> The most important consequence of these changes in the nominal and verbal paradigms regard the rendering of the ablative ending  $-ati$  and of the third person ending  $-ti$ , becoming respectively  $-ari$  and  $-ri$ ; the clitic pronoun  $-ti$  is also attested in the form  $-ri$ .

Once this phonemic inventory is inherited from Proto-Anatolian, morphophonemics and phonotactic rules synchronically intervene, producing variations that may be reflected in the writing system: for the recognition of the parts of speech, it is important to mention them, as well. So far, the most important change has influenced the phonotactic structure of words in the rendering of complex coronal groups. A conditional assimilation occurs on phonotactic boundaries, in the form  $VD-T^\circ > VZT^\circ$ , and is apparent in the inflection of the second person plural medio-passive of the verb  $ad-$ , “to eat”:  $ad-tuwari > aztuwari$  (Yakubovich 2015b; note, however, that the inflection of  $ad-$  is, to date, the only attested case proving this kind of morphophonemic sound change). A similar and possibly related phenomenon is the affrication (or, in Yakubovich’s 2015b terminology,  $t$ -epenthesis) of a fricative coronal after nasal or lateral sounds ( $n$ ,  $l$ ) in the morphemic boundary before the neutral suffix  $-sa$ :  $wanit-$  :  $wanisa$  =  $parnan-$  :  $parnan\check{z}a$ . Finally, a switch from  $n$  to  $m$  seems to occur before a labial stop:  $nP > mP$ . These synchronic morphophonemic sound changes are syntagmatic in nature, which should be kept in mind when studying the syntactic structures of Luwian, as they allow for the interpretation of morphosyntactic inflection and agreement of words composing phrases.

<sup>30</sup> See Rieken and Yakubovich 2010.

## §4.2. Morphology

As it is typical for ancient Indo-European languages, Luwian is, of course, an inflected language. The nominal system inflects for case, gender (animate versus inanimate, with no inherited feminine) and number (singular versus plural, with no inherited dual synchronically attested). The verbal system is very simple and seems to consist of only one conjugation (the *mi*-conjugation, with sparse traces of a *hi*-conjugation, which is not fully developed as in Hittite), one productive participle (the *-mma/i-* forms, with a second type of old participle in *-ant-* that is synchronically lexicalized), two finite moods (indicative and imperative), two tenses (preterite and present/future) and two voices (active and medio-passive). As for non-finite verbal forms, along with the participle, a patient-aligned verbal noun in *-mina* is attested with a function generally described as “gerundive” (*piyamina*, “(is) to be given”; cf. Melchert 2003, Giusfredi 2017a), while an agent-aligned one in *-u(a)ra-* has been hypothesized (cf. Yakubovich 2015b, but cf. below fn. 45). Both forms only occur in the predicative position, generally in null copular small clauses (less frequently in the form with *as-*, “to be”). Finally, an infinitive exists, with ending *-una*.

As verbs and nominals co-inflect according to the agreement rules, which are typical of the Indo-European system, the verb persons inflect for number depending of the morphological features of the subject (a case of the syntagmatic marking of the subject on the verbal string, which is the common rule for most languages of the Indo-European or Indo-Hittite group).

### §4.2.1. Nouns and adjectives, formation and inflection

Etymologically, Luwian nominals go back to Indo-European or Indo-Hittite protoforms. Without attempting a complete taxonomy, the main structures are:

- 1) root nouns (root + ending, e.g., *has* “bone” < \**h<sub>2</sub>óst*);
- 2) thematic nouns (root + theme + ending, e.g., *ta(h)ha-* “altar (vel sim.” < \**stoh<sub>2</sub>-o-*);
- 3) thematic nouns with inherited suffixes (root + suffix + theme + ending, e.g., *tani-* “soul” < \**sth<sub>2</sub>-(e)n-o-*).

Within Proto-Anatolian, Luwic or Luwian proper, other synchronically productive suffixes exist, which generate nominals starting from various parts of speech: for instance *-alla/i-* builds nouns and adjectives from

nouns (*tapariyalla/i-* “ruler”, from *tapariya-* “power, authority”), while *-ahid-* generates abstract nouns from adverbials, nouns and possibly verbs (e.g. *iunahid-* “mobility (vel sim.)” from *iuna-* “to go (vel sim.)”). A complete inventory of these formants is still a *desideratum*, and attempting to list them all would go beyond the scope of this synthetical overview; cf. however, Melchert (2003) for more complete lists of suffixes that are active in nominal formation.

Whatever the exact formation of a single word, it will end up showing the features of a vocalic or consonantal stem, which is then synchronically inflected according to the nominal paradigm. Consonantal stems will directly host the ending, which may result in phonotactic and morphophonemic alterations of the phonological form. Vowel themes may be *-a-*, *-i-*, *-u-* or diphthongs; assimilations and contractions may also occur. Both consonant stems and some *-a-* stems, are affected by an important morphological change that needs to be mentioned: the so-called *i*-mutation, which affects the direct cases of common gender nouns, where either a thematic /i/ is added or the expected thematic /a/ is changed into an /i/, producing an alternating paradigm with *i*-themed nominatives and accusatives (e.g., *massanInz(i)*, “gods”) and *a*-themed indirect cases (e.g., *massanAnz(a)* “to the gods”).<sup>31</sup>

The inflection of nouns and adjectives in Luwian employs the following endings (I do not consider the ergative-like extension in *-anti-* to be an inflectional case; cf. below, §4.3.3.):<sup>32</sup>

<sup>31</sup> Cf. the recent discussion by Yakubovich (2015b, 12f.), who also shows that the true dative singular ending in *-a* is a feature of surviving a-themes.

<sup>32</sup> I do not present a full table of the phonotactic and morphophonemic realization of suffixes with respect to different themes, as this would go beyond the scope of the brief presentation here, which is aimed at providing the basic understanding of Luwian grammar needed to introduce the present study on the syntactic structure of the language.

	Singular		Plural	
	Common	Neuter	Common	Neuter
Nominative	-s	-Ø*	-nzi	-a/-Ø
Accusative	-n	-Ø*	-nz(i)	-a/-Ø
Genitive	-s, -as, -as(s)i, -as(s)a			
Dative/ Locative	-i,-iya, -a		-anz	
Ablative/ Instrumental	-adi, -ari			
Vocative	-s, -Ø	unattested	-nzi	unattested

Table 4: The Luvian nominal paradigm

A few observations are in order. Firstly, the direct cases of the neuter inflection (\*) take a nearly compulsory suffix *-sa*, which becomes *-za* after a nasal coronal. In at least one case, the word for stele (vel sim.), *tanit-/tanisa*, the suffix was successively reanalysed as part of the root, with the noun inflecting as an *-a* theme. In all other cases, *-sa* synchronically behaves as a proper case marker for singular nominative and accusative neuter nouns.

The second peculiarity of the paradigm regards the complex situation of the formation of genitives, which is highly relevant for the assessment of the syntax of nested NPs featuring possession. Luvian seems to have an inflected genitive with ending in *-s*, and also some forms that seem to end in *-a(s)si* and *-a(s)sa*, where the brackets depend on the graphemic sub-optimality of the hieroglyphic script. However, it also makes use of a different strategy for marking possession, which is derivational rather than inflectional and usually goes by the label of "genitival adjectivation".

As a rule, genitival adjectives of Luvian take on one of the following endings:

- 1) *-assi-* or *-assa-* (which is very similar to the *-a(s)si* and *-a(s)sa* inflected genitives; the forms share at least a common etymology, possibly going back to PIE *\*-osyo-*<sup>33</sup>);
- 2) *-iya-* (often contracted in *-i-*, which makes the form identical to the base noun if the base noun is an *i*-theme: *tati-* “father” : *tati-* (< *tatiya-*) “paternal”);
- 3) *-izza-* and *-wann(i)-* (limited to proper and especially geographical names).

The resulting forms are adjectival and agree with the noun they refer to. The exact distribution of genitival adjectives throughout the Luwian corpus is complex and presents some significant features. First of all, these constructions almost absolutely prevail over inflected genitives in the Kizzuwatna-Luwian corpus, which may depend on the strong influence of the Hurrian language, which is agglutinative and makes use of *Suffixaufnahme* for the construction of embedded and complex nominal phrases. One important morphosyntactic peculiarity of the genitival adjectives in Kizzuwatna-Luwian alone is that they seem to undergo a strongly analytical and near-agglutinative process of inflection, which allows for number inflection and agreement with the noun they refer to *before* the addition of the genitival adjectival morpheme, such that, for instance, one can encounter *massan-assi-* “of the god” (from *massana/i-* “god”), as opposed to “*massan-anz-assa/i-* “of the gods”: this phenomenon, too, may be attributed to the contact with agglutinative Hurrian.<sup>34</sup> Another significant feature of the distribution of genitival adjectives in Luwian is their prevalence in oblique cases NPs, as discussed by Yakubovich (2008) and Bauer (2014).

Apart from genitival adjectives, which present a peculiar *-an* ending for the dative singular form, adjectives in Luwian inflect according to the scheme presented above in Table 4. As in most Indo-European and Indo-Hittite languages, they agree with the noun they refer to in number and grammatical cases (including gender and case information). A partial exception is represented by numerals: according to the distribution of the occurrences in the attested corpus, numerals 1 and 5

<sup>33</sup> See Melchert 2012.

<sup>34</sup> Cf. Yakubovich 2010, 50ff. Also Simon 2016 for a different view.

or higher inflect as singular adjectives, while numerals 2, 3 and 4 inflect with plural endings (Bauer 2011; 2014).

#### §4.2.2. *Pronouns*

Beside nouns and adjectives, proper nominals of Luwian also include pronouns, divided into different categories. In general, only those elements that replace a noun should be considered pronominal. Under this distributional perspective, some words that are traditionally labelled as pronouns would result in being misnamed. For instance, Anatolian languages contain possessive adjectives, which can be used both pronominally and adjectivally: *amis tatis*, “my father”, features a possessive adjective *ami-*, which, however, can also be used pronominally, without being referred to a noun, as the English “mine” (the use is attested, although very sporadically and only in the ASSUR Letters, highly colloquial epistolary documents from the eighth century BCE<sup>35</sup>).

The label pronoun, therefore, is generalized to parts of speech that may be functionally pronominal, but are formally and originally adjectival. That said, the term “pronoun” is often employed to refer to this part of speech in order to maintain a terminology that is consistent with the tradition of Anatolian (and Indo-European) studies; when, however, a pronoun occurs syntagmatically in an adjectival position, the resulting phrase must of course be distributed adjectivally, and, as a consequence, must be described and discussed as such.

As for the types of pronouns attested in Luwian, there are a few categories that can be easily identified:

- 1) *Demonstrative* pronouns encode a deixis or indicate an anaphoric reference to a textually, contextually or pragmatically defined element. In Luwian, we have two, with traces of a third one, which no longer seems to be used as such in historical times.<sup>36</sup>
  - a. *apa-* is the distal demonstrative, roughly corresponding to the English “that”; isolated, it can also have the function of an orthotonic third-person personal pronoun, roughly corresponding to the

<sup>35</sup> See Hawkins 2000, 533ff.; and Giusfredi 2010, 208ff..

<sup>36</sup> Cf. Chapter 5, §3.

English “he, she, it” and, if inflected in the plural, “they”.

- b. *za-* is the proximal demonstrative, roughly corresponding to English “this”.
  - c. *\*anna/i-* is a reconstructable yet unattested pronoun that possibly survives in derived forms; cf. Chapter 4, §3. for a short discussion.
- 2) *Personal* pronouns follow the three-person pattern of verbal inflection, but since no third person orthotonic pronoun exists, it is synchronically replaced by a suppletive use of the distal demonstrative *apa-*. They inflect for number and case. They exist in an orthotonic series as well as in a clitic series.
  - 3) *Relative* pronouns of Luwian go back to a series with labiovelar of Indo-European (or Indo-Hittite), and they correspond roughly to the *wh*-elements of English.

As previously stated, a fourth class exists, that of the so-called *possessive* pronouns. They correspond to the personal pronouns and, while they sometimes inflect independently, they generally agree with a noun and are therefore mostly used adjectivally. Unlike Hittite, no series of clitic possessive elements exists in Luwian.

On the morphological level, pronouns have inflectional endings that are different from those of the noun and adjective paradigms. A general table of the inflectional endings of pronouns, valid for the demonstratives (*za-* and *apa-*) and for the relative (*kwa/i-*), will now be provided.

	Singular		Plural	
	Common	Neuter	Common	Neuter
Nominative	-s	-Ø, -a, -an <sup>37</sup>	-nzi	-(a)ya
Accusative	-n		-nzi, -nz <sup>38</sup>	
Genitive	-as(s)i (attested only for demonstratives)			
Dative/ Locative	-(t)ti		-(t)tanz(a)	

<sup>37</sup> In the sequence *kwan-za*, attested in Iron Age Luwian only.

<sup>38</sup> Kizzuwatna Luwian.

Ablative/ Instrumental	-in, -ati, -atin (used as adverbials)
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Table 5: The inflection of pronouns

Orthotonic personal pronouns have an abridged inflection, which only opposes the nominative to all other cases (note that there are no proper third-person pronouns; the forms of demonstrative *apa-* are used as suppletives):

	1 <sup>st</sup> singular	2 <sup>nd</sup> singular	1 <sup>st</sup> plural	2 <sup>nd</sup> plural
Nominative	amu	ti	anz(anz)	unz(anz)
Other cases	amu	tu	anz(anz)	unz(anz)

Table 6: The orthotonic personal pronouns of Luvian

Apart from orthotonic pronouns, Luvian also has a set of clitic personal pronouns, which belong to a larger set of unaccented elements that emerge in the clause-level Wackernagel position, following the first prosodically or inherently accented word of a sentence (in some cases, this can simply be the so-called “connectives” *a-* and *pa-*; see §4.2.4. below).

Their function is usually anaphoric, but their syntactic function and behaviour will be discussed in Chapters 3 (§2.2.) and 5. As far as their morphology is concerned, we recognize the following inflectional endings:

	1 <sup>st</sup> singular	2 <sup>nd</sup> singular	3 <sup>rd</sup> singular	1 <sup>st</sup> plural	2 <sup>nd</sup> plural	3 <sup>rd</sup> plural
N			-as (c.), -ada (n.)			-ada

A	-mu	-tu	-an (c.), ada (n.)	-anz	-mmanz	-ada <sup>39</sup>
D/L	-mu	-tu	-tu	-anz	-mmanz	-mmanz <sup>40</sup>
Refl	-mi	-ti	-ti	-anz	-mmanz	-mmanz

Table 7: The clitic personal pronouns of Luwian

#### §4.2.3. Verbs

While the Luwian verbal system is extremely close to that of Hittite, it seems to be slightly simpler (i.e., a lower number of grammatical categories are represented in the morphology of the verbs).

In the indicative mode, used for declarative sentences and for finite subordinates, two tenses are distinguished: present/future and preterite (or simply past tense). There only seems to be one conjugation, although some different endings occur in the second- and third-person singular, that, however, are not codistributed with absolute regularity, and do not form a full *hi*-conjugation as the one that is synchronically present in the Hittite language.

Therefore, the table of indicative verbal endings is presented without distinguishing any different conjugations. Two diatheses, on the other hand, certainly exist: active and medio-passive, with medio-passive covering the functions of a medium and, in some contexts and for some specific predicates, those of a proper passive voice.

<sup>39</sup> Cf. Melchert 2000 for a form *-as* attested in Kizzuwatna Luwian only.

<sup>40</sup> A form in *-mmas* is sparsely attested in Kizzuwatna Luwian.

Active				
	Present/Future		Preterite	
Person	Singular	Plural	Singular	Plural
1 <sup>st</sup>	-wi	-unni	-ha, -hha, -hhan	<i>unattested</i>
2 <sup>nd</sup>	-si <sup>41</sup> , -tti(s)	-ttani	-s, -tta	<i>unattested</i>
3 <sup>rd</sup>	-ti, -tti, -i	-(a)nti	-ta, -tta	-(a)nta, -aunta
Medio-Passive				
	Present/Future		Preterite	
	Singular	Plural	Singular	Plural
1 <sup>st</sup>	<i>unattested</i>	<i>unattested</i>	-(h)hasi <sup>42</sup>	<i>unattested</i>
2 <sup>nd</sup>	<i>unattested</i>	-(t)tuwari	<i>unattested</i>	<i>unattested</i>
3 <sup>rd</sup>	-(t)tar(i), -ar(i)	-(a)ntari	-(t)tasi, -asi <sup>43</sup>	-(a)ntasi <sup>44</sup>

Table 8: The indicative verbal endings of Luwian

The other finite mode of Luwian is the imperative mode (cf. also Chapter 6, §1.2.). As is the case in many ancient Indo-European languages, and in many other languages of the world, it is not limited to the second-person, but also involves forms for the first- and third-person, both in the singular and the plural. The imperative exists both for the active inflection and for the medio-passive inflections.

	Active		Medio-Passive	
Person	Singular	Plural	Singular	Plural

<sup>41</sup> Iron Age only.

<sup>42</sup> Iron Age only.

<sup>43</sup> Iron Age only.

<sup>44</sup> Iron Age only.

1 <sup>st</sup>	-llu	<i>unattested</i>	<i>unattested</i>	<i>unattested</i>
2 <sup>nd</sup>	-∅	-(t)tan, -(t)tanu	<i>unattested</i>	<i>unattested</i>
3 <sup>rd</sup>	-tu, -ttu, -u	-(a)ntu	-aru	-(a)ntaru <sup>45</sup>

Table 9: The imperative verbal endings of Luwian

As for the non-finite forms of the verb, Luwian has one infinitive in *-una*, mostly used in final or quasi-final constructions. Meanwhile, a modal patient-oriented verbal substantive usually labelled “gerundive”, with the ending *-mina*, uninflected and always predicative (e.g., DARE-*mi-na* /piyamina/ “(is/are) to be given”) and possibly a verbal noun in *-w(a)r(a)*, which has so far only been attested in *ha-tu+ra/i* /hatura/ (“writing(?) (*vel sim.*)”),<sup>46</sup> is simply a deverbative formation and not necessarily part of the verbal paradigm.

Participles exist in two forms: old participles in *-(a)nt-*, lexicalized as substantives or adjectives and unproductive in Luwian proper, and a productive class in *-mma/i*.<sup>47</sup> Participles inflect in the same way as adjectives and agree in case, gender and number with the noun they refer to.

#### §4.2.4. Non-pronominal clitics and adverbials

The verbal valency is filled by arguments and can be modified by adverbials, which, in Luwian, can be orthotonic or clitic. Orthotonic adverbials are obviously uninflected parts of speech, which occur in

<sup>45</sup> Unattested according to Yakubovich 2015b; it is actually attested both in Hieroglyphic Luwian KARKEMIŠ A11b+c §32 (AUDIRE+*MI-ta+ra/i-ru* “may they listen”) and in cuneiform Luwian KUB 35, 128 iii<sup>3</sup> 12 (x-]*a-la-aš-ha-an-da-ru* - meaning uncertain).

<sup>46</sup> In a recent unpublished paper (“*HI, HOW ARE YOU? ME, I AM FINE. A NEW INTERPRETATION OF LUWIAN HATURA-*”), W. Waal proposed a different interpretation of *hatura-*, that would obliterate its existence as a specific verbal noun. I am unable to evaluate the details of her promising hypothesis from the handout only, which the author kindly sent to me. Nevertheless, I refer to it for sake of completeness. Indeed, were *hatura-* indeed not a verbal noun with the meaning “writing”, then clear examples of the *-w(a)r(a)* forms would not exist in Luwian.

<sup>47</sup> Cf. in general Payne 2010, 30; Melchert 2013; Giusfredi 2017a.

various positions of a sentence, both at the very beginning and in the middle. Thus, adverbs are simply uninflected modifiers of the predication that occur preverbally. They have no morphology, and, derivationally, they can be divided into two classes:

- 1) Primary adverbs, which, in all likelihood, entered Luwian as adverbial elements, although they can have various Indo-European and Proto-Anatolian etymologies (e.g. *arha* “away”, possibly derived from an archaic nominal allative; *namun* “now”, an original adverb to be compared with a number of Indo-European cognates such as Lat. *nunc*, modern German *nun*; *zawi(n)* “here”, perhaps derived from an original pronoun);
- 2) Secondary adverbs, which are actually neuter forms of adjectives used adverbially (e.g. *wasu* “well” from *wasu-* “good”, *aru* “highly, very (vel sim.)” from *aru-* “high”).

Special types of adverbials are the preverbs (which occur preverbally in a fashion similar to the particles of the separable verbs of German) and the adpositions. The boundaries between the two classes are quite blurry, and, in some cases, it is hard to tell them apart (in all the cases in which a potential P element is preceded by a noun and followed by a verb: [N P] [V] vs. [N] [P V]).

The series that was derived from Indo-European \**opi* (Melchert 2009, 336) produces in Luwian the adverbials *api* “backwards”, *appa* “back” and the adverbial and postposition *appan* “back, behind”. The Indo-European series \**per* is represented by the adverbials *pari* and *parran*, “before”. The root \**ser* produces the adverbial *sarri* “up(wards), above” and the postpositional *sarra* “on, over”.

While these adverbials are orthotonic, Luwian, in common with Hittite and other Anatolian languages, involves certain adverbial particles that modify the semantics of the predication and are clitic. They emerge in the clause-level Wackernagel position, combining prosodically with the clitic pronouns described above in §4.2.2. While Hittite has a series of five such particles, Luwian, to the best of our current knowledge, has only two: *-tta* and *-tar* (the former corresponds roughly to Hitt. *-kan* and *-(a)sta*, indicating a telic movement with reaching and possibly trespassing, while the latter is similar, but not identical, to Hittite *-san*, indicating a telic movement with surface contact. For further details on

the use of these particles and the possible existence of a particle *-(V)r*, cf. Giusfredi 2014, with reference to previous works.

These clitic adverbials belong to a class of slightly ill-defined metalinguistic categories, usually labelled as *sentence particles*. In Luwian, they include two other types of sentence-level clitics, which are neither pronouns, nor adverbials, and, according to traditional grammar, can be categorized as follows:

1. The direct speech particle *-wa(r)*, occurring in the same position of the other sentence clitics, whenever the clause is part of referred direct speech.
2. The so-called clitic “connectors” (a misleading designation that should be stricken), namely:
  - a. *-pa*, slightly adversative according to most grammatical descriptions and similar to Hittite *-(m)a*. It is likely that this particle, always attached to a fronted nominal, is in fact a marker of contrastivity, with a secondary effect of producing a mildly adversative nuance at the discourse-level.<sup>48</sup>
  - b. *-ha*, sometimes described as a coordinating clitic; it was most likely a marker of additive focus, which, of course, can be both clause-peripheral or located inside a specific phrase.

The distributional features of these particles, with particular reference to the mechanics of conjunctions, will be described in the Chapters 2 and 5 of the present monograph.

### §4.3. Elements of Luwian morphosyntax

#### §4.3.1. Nominal case functions and agreement

The morphosyntactic feature of agreement in Luwian is similar to that of most Indo-European languages. As a general rule a noun inflects for case, gender and number, while an adjectival modifier takes on the corresponding case.

<sup>48</sup> Cf. Melchert 2004b, 8, 48, for the existence of two distinct particles, *-be* and *-pe*, in Lycian. The relationship with Luwian *-pa* still requires further investigation (note, however, that true cognacy is likely only in the case of Lycian *-be*, because of the lenis consonant; I thank H.C. Melchert, personal communication, for this observation).

As for the functions of cases, they are rather similar to the reconstructed original functions of the Indo-European ones. The nominative marks both the agent and the intransitive or passive subjects, while the accusative marks the patient of active verbs (but see also §4.3.3., below, for further details). The accusative, however, can also take the function of a directional case, a rather common feature of Indo-European languages. The morphological distinction between the nominative and accusative is cancelled for the neuter nouns, which show no distinction (however, alignment rules apply, see §4.3.3. below). The dative/locative is one of the two local cases of Luwian, which covers a large set of locative and directional functions, including a state inside a location (English “in”), by a location (English “at”), and a movement towards a position, with or without an ingressive feature. The other local case of Luwian is ablative, the ending of which, *-(a)ti*, is the Luwian regularly non-affricated correspondent of Hittite *-az*. As is the case in Late Hittite, the Luwian ablative is not just a local case indicating motion from (or from inside) a location, but also an instrumental case (contrary to Hittite, no historical phase of Luwian presents a morphologically independent instrumental case). Furthermore, the ablative case can also express the agent in passive constructions (although the occurrences are very rare).<sup>49</sup> Apart from being selected by verbal heads, noun cases can also be the result of the regency of non-verbal ones, as is the case in a postpositional phrase (PP). Most postpositions of Luwian (cf. the list in §4.2.4.) take the dative/locative case of the nominal complement. The only apparent exception is *arha*, meaning “away”, and which Payne (2011) describes as a postposition selecting the ablative. However, there are very few cases in which *arha* seems to be a postposition: it very often occurs alone as an adverbial or as a proper preverb. A case in which it seems to properly head a PP is represented by the sentence TELL AHMAR 2, §19:

[2]	★ <i>a</i>	<i>-wa</i>	<i>-a(n)</i>	<i>-tta</i>	<i>tipasati</i>
	INTR	QUOT	he.ACC.	PTCL	sky.A/I
	<i>arha</i>	<i>Tarhunzas</i>		<i>tatariya(t)tu</i>	

<sup>49</sup> The construction is apparently – and perhaps accidentally – limited to participial constructions, e.g. *massanati azammis* “loved by the god(s)” in MARAS 1, §1 (cf. Payne 2010, 35). On the issue of the ablative-instrumental as a complement of agent in Anatolian, see Melchert 2016a, 239-242.

away      T.NOM                      curse.IMP3SG  
 “May Tarhunzas curse him from the sky.”<sup>50</sup>

The position of *arha* in [2] is neither directly preverbal (and there is no motion verb!), nor properly fronted. Unless both the ablative *tipasati* “from the sky” and the adverbial element *arha* were fronted independently from each other, this construction seems to prove that *arha* was, in some instances, the head of a PP, and, as such, the only Luwian postposition assigning a case different from the dative/locative.

#### §4.3.2. Noun modifiers and nominal chains

Generally speaking, all Luwian modifiers – including genitives, possessive adjectives, other attributes, demonstrative adjectives and numerals – seem to simply behave as optional adjuncts with respect to the noun (there is no compulsory class of determiners that guarantee the grammaticality of an argument phrase). Adjectival agreement is usually perfect in terms of number, case and gender.

An exception to perfect agreement is represented by numerals higher than four: as shown by Bauer (2014, 106–116), such numerals agree with nouns inflected in singular number whenever the quantified nouns follow the modifier, while plural inflection may occur when the numeral follows its nominal head.

An important issue with the nominal morphosyntax of Luwian is represented by the use of inflectional genitives and inflected genitival adjectives both in short and in long and complex possession chains.<sup>51</sup> The existence of two different means to express a nominal possession (not counting the personal possessive adjectives correlated to the personal pronouns, cf. §4.2.2. above) is a peculiarity of Luwian that Hittite does not share. As previously stated, morphosyntactically, the two strategies differ from each other with respect to agreement (cf. also Table 4 above):

[3a]      *tipas-as*                      *suri-n*  
             sky-GEN.SG                  richness-ACC.SG

<sup>50</sup> Hawkins, 2000, 227ff. Text: wa/i-ta-’ “CAELUM”-ti ARHA (DEUS)TO-NITRUS-za-sa | (LOQUI)tá-tara/i-ia-tú.

<sup>51</sup> Cf. the pioneering study by Neumann 1982 and the recent work by Bauer 2014, in particular 164-186.

- “The richness of the sky/skies.”<sup>52</sup>  
 [3b] *tipasassi-s*            *Tarhunza-s*  
       sky.of-NOM.SG        T.-NOM.SG  
       “Tarhunzas of the sky/skies”<sup>53</sup>

While the sometimes defective graphemics of the hieroglyphic writing system makes it difficult to distinguish some instances of the *-assa/i-* inflective genitive from an *-assa/i-* genitival adjective, in general this scheme allows for the possibility of either using an adjectival marking of possession, which is non-ambiguously in syntagmatic agreement with the possessed noun, or a proper genitival form (which, in some cases, may result in confusion for us, because of the similar sigmatic ending of the inflected genitive and nominative case of common gender nouns). The different realizations have been morphosyntactically studied by Bauer (2014, 164–186), while the possible preference for genitival adjectives over inflected genitives in complex chains involving oblique cases has been explored by Yakubovich (2008). Positionally, however, inflected genitives and genitival adjectives behave as typical modifiers, which are usually, but not strictly, aligned to the left with respect to the *regens* (cf. Chapter 2).

#### §4.3.3. *Verbal morphosyntax, valency and alignment*

Verbs in Luwian agree with the subject argument for person and number.<sup>54</sup> As in all ancient Indo-European languages, and contrary to what happens in some agglutinative languages of the Ancient Near East (for instance in Sumerian), no marking of the object argument (nor of any other argument) is present in the inflected verb (chain).

<sup>52</sup> CEKKE §25, Hawkins 2000, 146ff. Text: “CAELUM”-sa CORNU+RA/I-na.

<sup>53</sup> TELL AHMAR 1, §2, Hawkins 2000, 240ff. Text: “CAELUM”-si-i-sa || (DEUS)TONITRUS-hu-sa.

<sup>54</sup> Due to limited data in Kizzuwatna Luwian and the ambiguities of hieroglyphic spellings (especially the one that prevents *-nT-* clusters from being clearly spelled), it is impossible to tell whether Luwian, like Hittite, retained the PIE rule by which a neuter plural (collective) subject takes a singular verb.

A morphosyntactic strategy for valency reduction<sup>55</sup> exists in Luwian: as in most languages with a nominative-accusative alignment, Luwian is able to passivize transitive verbs. Passivization turns the patient of a transitive predication into the intransitive subject of a verb, which, in Luwian, will be inflected following the medio-passive conjugation. The non-core agent of the passive construction is inflected in the ablative, although currently the constructions in which the agent is explicitly expressed in the ablative are limited to patient-aligned participles.

Luwian nominal arguments can be orthotonic or clitic, with pronoun cliticization depending on the referential scheme of the text on the discourse level. Clitics are usually anaphoric, with a few pragmatically marked instances of deictic ones.

“Alignment” constraints seem to influence nominals, both orthotonic and clitic ones. Like the Hittite language, Luwian also has a morphosyntactic rule preventing neuter substantives from being the syntactic subject (and semantic agent) of a transitive verbs (and, with due caution depending on the lack of evidence, of unergative intransitive ones). Hittite notoriously copes with this constraint by constructing a morphological derivative *-ant*-suffixed noun from neutra, which inflects as a common-gender substantive and is morphosyntactically capable of being the subject of agentive predications, e.g., *\*watar human parkunuskizzi* but *witen-anza human parkunuskizzi* “The water purifies everything” (KUB 43, 58 i 43f., cf. Strauß 2006, 332, 343; Goedegebuure 2012, 28). Similarly, Luwian employs a suffix *-anti-*, as in the following example:

[4]	<i>sandu</i>	<i>-ata</i>	<i>parnantinzi</i>
	release.IMP3PL	they.ACC	house. <i>anti</i> .NOM.PL

<sup>55</sup> On the problem of how to define and measure verbal valencies, and how to assess cases of non-morphosyntactic reductions or alterations, cf. the work by Allerton (1982) on valency in English, and the critical review by Langacker (1984). By “non-morphosyntactic reduction” I here refer to those cases in which surface valency alterations do not depend on a recategorization of morphosyntactic marks, as it happens, on the other hand, in the case of passivization and antipassivization (on argument structures and semantics roles from a typological perspective cf. the study by Dixon and Aikhenvald 1997).

“May the houses release them.”<sup>56</sup>

As for clitic arguments, a different type of alignment constraint applies. Luwian, like Hittite, does not accept third-person clitic personal pronouns as the subjects of transitive and unergative intransitive verbs (regardless of the gender of the pronoun). This constraint was identified early for Hittite, while an important corollary was proven by Garrett (1990), who showed that on the other hand unaccusative intransitive verbs *require* the third-person clitic subject pronoun. Meanwhile, the validity of the subject pronoun constraint in Luwian was demonstrated at much later a date (Melchert 2011, cf. also van den Hout 2010, 203 with fn. 60).

Finally, a peculiar clitic argument is the Luwian “dative-reflexive” pronoun. While Hittite (especially in the earlier phases) expresses reflexive or reflexive-like predication with the particle *-za*, which is synchronically unrelated to a specific person and to the pronoun paradigm,<sup>57</sup> Luwian employs a pronoun series (see §4.2.2., Table 7, above). From a functional point of view, however, Luwian “dative-reflexive” clitics behave like the Hittite marker *-za*: (a) they act as reflexive elements, indicating a (generally imperfect) coreferentiality of subject and object; (b) they act as markers of mediality in improper reflexive constructions (they can usually be interpreted as markers of the beneficiary); (c) furthermore, first- and second-person reflexive pronouns are obligatory in order to mark the subject of copular clauses.

[5a]      *assa*                      *-ti*              *ilhadu*  
mouth.N/A.SG              REFL3SG wash.IMP.3SG  
“May he wash his own mouth.”<sup>58</sup> (cf. Italian “che egli si lavi la bocca”)

[5b]      *ililhai*                      *-ti*              *malhassassis EN-as taparu*  
wash.PRS3SG              REFL3SG ritual.patron.NOM.SG curse(?)N/A.SG  
“The ritual patron washes (away) the curse(?) from/for himself.”<sup>59</sup>

<sup>56</sup> KUB 35, 54 ii 49; Starke 1985, 65ff. Text: [š]a-a-an-du-a-ta pár-na-an-ti-in-zi.

<sup>57</sup> On the functions of Hittite *-za* cf. Hoffner and Melchert 2008, 357-364; note also that in Hittite, especially in the later phases of the language, some functions of *-za* could also be performed by a dative personal pronoun.

<sup>58</sup> KUB 9, 6+ ii 14; Starke 1985, 111ff. Text: a-a-aš-ša-ti e-el-ha-a-du.

[5c]      *amu*      *-mi*      *Wastis*  
           I.NOM    REFL1SG   W.NOM  
           ‘‘I am Wastis.’’<sup>60</sup>

Regarding reflexive constructions, it is important to notice that Luwian lacks any evidence of proper reflexive forms, in which there is a complete and perfect referential identity of agent and patient: forms similar to the English ‘‘kill oneself’’ or the Italian ‘‘lavarsi’’ (equivalent to the morphologically unmarked English reflexive ‘‘to wash’’) do not clearly emerge from the attested corpus. Under this perspective, listing the reflexive pronouns under the label of clitic arguments may result in a metalinguistic misnomer; this solution is conventionally adopted, and does not imply that Luwian forms, such as *-mi* or *-ti*, have the syntactic status of proper nominal arguments of the verb. Further discussion will follow in Chapter 3.

#### §4.3.4. *Indirect objects and the ablative/instrumental*

Being an inflected language, Luwian marks by bare inflected nouns many elements, which, in modern European languages like English, Italian or French, are encoded with a prepositional phrase. Dative nominals may belong to the valency of the verb (e.g., in case of trivalent verbs such as *piya-* ‘‘give’’, which assigns thematic roles to an agent, a patient and a receiver). In other cases, they may also be syntactic adjuncts, such that their semantic contribution to the predication is not obligatory from the perspective of grammaticality. This is the case, for instance, of the dative of advantage, or of the locative nominals, which can be in complementary distribution with non-argumental local adverbials. As for ablative/instrumental nominals, there is no evidence in Luwian of verbs that require an ablative to fulfil the valency of the predication. Syntactically, ablative arguments are usually in complementary distribution with adverbial pro-forms (e.g., *apin* and *zin*, ‘‘from there’’ and ‘‘from here’’, respectively<sup>61</sup>).

<sup>59</sup> Formula, e.g. KUB 35, 21:30; Starke 1985, 87ff. Text: *i-li-il-ha-a-i-ti m[a-al-]ha-aš-ša-aš-ši-iš* [EN-aš t]a-pa-ru and KUB 32, 9 ro. 16; Starke 1985, *ibid.* Text: *[i-li-i]l-h[a-]i-t[i] ma-al-ha-aš-š[a-aš-ši-iš E]N-aš ta-pa-ru.*

<sup>60</sup> KARKEMIŠ A1b §1; Hawkins 2000, 92. Text: EGO-mi-i 'BONUS-ti-sa

<sup>61</sup> On the ablatival adverbials of Luwian see Goedegebuure 2007.

In the unmarked clause-architecture, indirect objects and ablative/instrumental elements occur in the central part of the core-clause, after the left-periphery and before the verbal predication. In Chapter 5, the case will be argued, with some caution, for a relative precedence of some of these elements with respect to the direct object; however, the data are insufficient to fully demonstrate the prevalence of a pattern.

#### §4.3.5. *Adverbs, place-words and post-positions*

In addition to noun phrases inflected in oblique cases, Luwian also has postpositions (and very few prepositions in Kizzuwatna; cf. §4.2.4., above). With regard to the specific words used as postpositions, as previously stated they are local adverbials and make up a class of parts of speech, which can work, under different constructions, as:

1. Proper postpositions, when combined with nouns according to regency rules;
2. Proper adverbs, modifying and governing the semantics of the inflected predicate;
3. Proper preverbs.

While a PP is in general a nominal phrase headed by a postposition (e.g. *waniti parran*, “in front of the stele”) and is detectable as such whenever the regency (e.g., dative/locative + *parran* = “in front of”) and the phrase structure are unambiguous, the distinction between adverbs and preverbs requires further clarification.

Proper adverbs in Luwian behave like the adverbial elements of most Indo-European languages: they are uninflected, occur in different linear positions of the sentence and have scope over the predication. Preverbs, on the other hand, seem to be more strictly related to verbal semantics and occur regularly in identical phraseologies with significantly altered semantics, as it is also the case for the separable verbs of German. Preverbs in Luwian are generally relegated to an immediate preverbal position; however, syntactic alterations may move them to a middle or even leftmost position, while the semantics and the phraseological regularity remain the only criteria that allow for a recognition of displaced preverbs. Consider the following examples in which the adverbial element *appan*, “behind”, is used as a sentence-level adverb [6a] and as a preverb ([6b-c]) respectively:

- [6a] *appan -pa -wa ...zwaninzi apassin harmahin*  
 later *pa* QUOT ...dog.NOM.PL his.ACC.SG head.ACC.SG  
*arha adantu*  
 away eat.IMP3PL  
 “Afterwards, may the dogs (...) eat away his head.”<sup>62</sup>
- [6b] ★*a -wa -an -tta Kupapas appan muwai*  
 INTR QUOT he.ACC PTCL *K*.NOM behind attack.PRS3SG  
 “And the goddess Kubaba attacks/hits him (from) behind?”<sup>63</sup>
- [6c] *Eas -wa hupalziyatiyanza harsanza*  
 Ea.NOM QUOT *h*.ACC.PL *h*.bread.ACC.PL  
*appan satta*  
 (behind/back) release.PST3SG  
 “The god Ea granted the *h. harsi*-bread loaves.”<sup>64</sup>

Occurrences such [6a] are problematic and difficult to interpret, because preverbs may be fronted. In other words, the verbal form may be better interpreted as *appan arha ad-* “eat/bite away”. Better examples of sentence-level modifiers are offered by the adverbial *api*, which occurs quite frequently in the meaning “after, furthermore”:

- [7] *api -ha -wa -anz targasnanzi*  
 further *ha* QUOT we.D/L donkey.NOM.PL  
*apanzi arha walanta*  
 this.NOM.PL away die.PST3PL  
 “Furthermore, those donkeys have died on us.”<sup>65</sup>

Among the modifiers of the verbal semantics, it is necessary to briefly outline the function of the clitic adverbial particles *-tta* and *-tar*,

<sup>62</sup> KARKEMIŞ A6 §31; Hawkins 2000, 125ff. Text: á-pa-pa-wa/i-’ (DEUS)ni-ka+ra/i-wa/i-sá CANIS-ni-i-zi á-pa-si-na | CAPUT-hi-na | ARHA EDERE-tú. Contrary to Hawkins, 2000, interpretation of á-pa- as personal pronoun is impossible, due to the lack of dative/locative ending -i.

<sup>63</sup> KAYSERİ §11; Hawkins 2000, 473ff. Text: wá/i-tá-’ | (DEUS)ku+AVIS-pa-pa-sa-’ | POST-na | FORTIS-wa/i-i; a parallel passage with the same verb is in SULTANHAN §23.

<sup>64</sup> KUB 9, 31 ii 33-34; Starke 1985, 50ff. Text: D<sup>É</sup>.A-áš-wa hu-u-pal-zi-ya-ti-ya-za har-ša-an-za (34) a-«ap»-pa-an ša-a-at-ta. Parallel text with same verb HT 1 ii 9.

<sup>65</sup> ASSUR Letter F, §21; Hawkins 2000, 537ff. Text: á-pi-ha-wa/i-za | ASINUS.ANIMAL-na-zi | a-pa-zi | ARHA-’ | MORI-ta.

occurring, generally, in the second-word Wackernagel position along with the other sentence clitics of Luwian. They seem to have both a locative function and a telic function, and, in spite of their position being prosodically defined, they are clause-level adverbs and semantically (and syntactically) have scope over the whole predication:

[8]	<i>sarri</i>	<i>-wa</i>	<i>-tar</i>	<i>niwarannin</i>	<i>wallitta</i>
	upwards	QUOT	PTCL	son.ACC.SG	lift.PST3SG
	“She lifted the child.” <sup>66</sup>				

In [8], the particle *-tar* completes the semantics of the predicate “to lift”. A final topic related to predicate modification is the system of negation. There are two basic negative “adverbs” – a rather problematic metalinguistic label employed here merely out of practical convenience – of Luwian: *nawa* (Bronze and Iron age) and *na* (Iron age only), on the one hand, and *nis* (Bronze and Iron age) and *ni* (Iron age only) on the other. *Nawa* and *na* produce predicate negation, while *nis/ni* is prohibitive.

#### §4.4. Elements of the Anatolian and Luwian clause structure

In the general descriptions of the Luwian grammar which have been published in recent years (Melchert 2003a; Plöchl 2003; Melchert 2004a; Payne 2011; Bauer 2014; cf. also Chapter 1), the standard word-order of a Luwian clause has been described as being S-O-V: the subject (morphosyntactic rendering of the roles of the agent or intransitive subject, following a general nominative/accusative alignment) precedes the object (morphosyntactic rendering of the patient), which precedes the verb. This is the same word order that occurs in Hittite and Palaic, and, pending better clarification of the grammar of minor languages such as Lycian<sup>67</sup> and Lydian,<sup>68</sup> it appears to represent the canonical one

<sup>66</sup> KUB 35, 88 iii 13; Starke 1985, 226f. Text: *ša-ar-ri-wa-tar DUMU-in wa-al-li-it-ta*.

<sup>67</sup> In early grammars, e.g. Melchert 2004, the word-order of Lycian is described as V-S-O. This may represent a contact-induced or internal alteration with respect to Anatolian, or depend on the peculiar type of texts that are preserved. It should be remembered that several texts are dedications on stone installations and tombs, while the few examples of this type of texts

for the entire ancient Anatolian language family. This is a nontrivial information with regard to the reconstruction of the verb position and the syntactic typology of Proto-Indo-European, as Anatolian languages represent the most ancient members of the group that modern linguists can currently read and understand.

This pattern derives from underlying structures that will be discussed in this book. The core arguments (put simply, subject for intransitive verbs and subject and object for the transitive verbs), however, are not the only elements that regularly occur in the standard unmarked clause of Anatolian. Proto-Anatolian made extensive use of apparent paratactic constructions. Furthermore, elements existed that marked the beginning of a new clause. Such elements also existed in the other Anatolian languages and usually go by the name of “connectives”. In Luwian there is only one: *a-*, which is extensively employed in all phases and varieties of the language (with an almost ubiquitous prevalence in the Iron age texts). Given its syntactic behaviour and syntagmatic non-exclusivity with respect to subordinators, the Luwian “connective” *a-* will require a dedicated discussion (see Chapters 5 and 6).

Since providing a structural description of Luwian is the aim of the present monograph, there is no point in dwelling any further on the clause architecture, which will be described and analysed in detail in the core chapters of this book. The aim of this study is to provide a description and a structural interpretation of the syntax of the Luwian language. Since the definitions of syntax and the phenomena that must be considered in a study of this kind may vary under different grammatical traditions, it will first be necessary to better clarify the perspective employed in this book.

This work belongs within the general framework of phrase-structure-based syntax, with a mild adherence to the cartographic tradition.<sup>69</sup>

frequently contain fronted verbs in Hieroglyphic Luwian as well (cf. Coticelli-Kurras and Giusfredi 2018; see also Chapter 5, below).

<sup>68</sup> The most recent published grammar, by Payne and Wintjes 2016, describes the standard word-order of the Lydian unmarked sentence as S-O-V. It should be stressed, however, that the textual data highlighting such order are sparse.

<sup>69</sup> Cf. Longobardi and Rizzi 2008. The cartographic program is one of the more recent developments regarding the theories of generative syntax. While its compatibility with minimalism (on which cf. Chomsky 1993, 1995, 2000;

Phrase-structural approaches are in opposition to non-hierarchical valency-oriented dependency-based syntactic models.<sup>70</sup> Within this perspective, *syntax* indicates the set of rules governing the patterns that are grammatical, or well formed, in a given language. Such patterns can be generalized as *syntactic structures*, by which each abstract set of patterns generated by an appropriate syntactic rule is indicated. A syntactic structure is defined according to patterns that, in the case of an Indo-European inflected language like Luwian, are encoded on the morphological and morphosyntactic level by phenomena of agreement and alignment. In practice, syntactic structures can be evaluated according to grammatical rules and the order in which the words that constitute a phrase and the phrases that constitute larger phrases or sentences occur in terms of an absolute or relative position. In the final linear realization of the clauses, which in the case of Luwian can only be examined indirectly through the written form without any direct phonetic and prosodic material, the overt syntactic patterns may undergo alterations dictated by the prosodic interface, which makes it necessary to consistently evaluate the attested structures considering the many factors that contribute their production.

All in all, it should be kept in mind that, ever since Saussure's *Cours de linguistique générale* (1916), the final goal of any linguistic theoretical categorization is to investigate the general phenomenon (language) by working on the epiphenomenal evidence (the human languages). When the available evidence is limited to a corpus of texts and sentences in a language, which has been completely extinct since the early 7<sup>th</sup> century BCE ca., various conceptual tools of linguistic investigation are obviously impossible to employ (elicitation, interview with the speaker,

2013; Epstein and Hornstein 2001; Jayaseelan 2008) still represents an open problem, explanatory adequacy as provided by the categorial system of the cartographic model is a powerful tool for the description of the syntactic structure of specific languages.

<sup>70</sup> Dependency grammars represent syntactic relationships in terms of simple head-dependent relationship. They are largely similar to phrase structure relationships; however, they fail to account for asymmetric rules and constraints, which depend on phrasal hierarchies, and are therefore less powerful when it comes to structural description. On valency-based dependency grammars and their relationship with minimalism see Osborne, Putnam and Gross 2011. On linearity in Indo-European, Viti 2015, 361-410.

etc.). While this is a very trivial observation, it is also the reason why the boundary between *ungrammatical* and *unattested* is extremely blurred, such that a reasonable amount of caution should accompany any results that one may reach.

#### §4.5. Concluding remark

The purpose of this very short grammatical survey was not to provide a full description of the grammar of the Luvian language. In spite of several similarities with Hittite and with the other members of the ancient Anatolian group, it is safe to say that while Luvian is a reasonably well-known and well-attested language, specific aspects of it remain that require further investigation (e.g., the exact phonetic interpretation of the two writing systems and, as a consequence, the proper rendering of morphological elements). While the aim of the present monograph is to investigate the syntactic structure of Luvian, occasional references will be made to morphophonemics and morphosyntactic rules, as well as to the interpretation of problematic patterns and words. In conclusion, this overview has been intended as a general reference. More specific or problematic features of the presented texts will be discussed separately in the relevant sections of the book.



## Chapter 2 - The Luwian Nominals: Nouns and Modifiers

### §1. A labelling issue: noun phrase (NP) or determiner phrase (DP)?

After Abney's study on determination (1987), and several follow-up studies, including Lyons' (1999) contribution on definiteness and the successive development of a proper split DP hypothesis (cf., in general, Longobardi 2001; Cinque, ed. 2002; Alexiadou et. al 2007), the issue of how nominal phrases should be labelled and analysed has received increasing attention. In languages such as English or Italian, a nominal argument requires overt determination, with the partial exception of bare plurals and singular mass nouns, which are, however, semantically explainable as generic or uncountable (cf. Chierchia 1998; Delfitto 2001). Within this perspective, determiners are analysed as heads of the overall argument phrase. The category includes articles, demonstratives, and other parts of speech that are complementarily distributed to them. The classification of specific word types under the category of determiners may vary from language to language.<sup>71</sup>

A DP hypothesis can be extended to determinerless languages, by assuming the existence of a functional head D<sup>o</sup>, which is not occupied by a lexical element. Addressing the problem of the universality of cross-linguistic patterns is not one of the aims of this work. However, since several languages – and Luwian, as it will be argued in this chapter, is one of them – mark the prominence of NP-internal elements by left-locating them, the hypothesis of an active left periphery within the phrase is a valid tool for syntactic description.

<sup>71</sup> For instance, in modern Italian or Ancient Greek there is no complementary distribution between possessives and articles: *il mio libro* and τὸ ἐμὸν βιβλίον are both grammatical, while English *\*the my book* is not.

On the other hand, some considerations are in order as far as general DP theory is concerned, with special reference to the problem of labelling nominal argument phrases as NPs or DPs in a language that lacks overt determination. Definiteness in Luvian is marked over the syntagmatic boundaries of the phrase, which include agreement features, as Luvian, like most related languages, generally requires the modifiers to co-inflect with the head noun. The categories of case, number and gender are all morphosyntactically mapped in the right area of the phrase (it is the noun's ending that defines the case, number and gender of the modifier). Articles do not exist, while demonstratives and possessives, when they occur, are not definiteness-assigning elements, but may be described as simple modifiers with a deictic, an anaphoric or a merely possessive value, given that the “bare” inflected noun can be a grammatical verbal argument by itself (cf. Giusfredi 2017b). Bošković (2008, based also on Chierchia's 1998 NP [ $\pm$ ARG] parametric distinction) formalized a difference between NP articleless languages and DP languages. While a corpus-based study of a dead language does not allow scholars to detect all the aspects that can be tested for modern languages, Luvian certainly conforms to several criteria typical of NP-languages, including: (1) adjunct extraction, (2) some forms of apparent scrambling (usually explainable in terms of movement), and (3) head internal relatives. Still, other expected criteria are not met: to mention the most important criterion, left-branch extraction (LBE) is not clearly attested in the corpus.<sup>72</sup> Therefore, for the purpose of this analysis of Luvian syntax, a neutral position will be maintained with respect to this issue, employing the notation DP/NP for argument nominals.

<sup>72</sup> LBE represents a transformation that moves the leftmost element from inside an argumental phrase to a different position in the sentence. It is attested in Serbo-Croatian:

<i>Lijepa</i>	<i>gleda</i>	<i>kuće</i>
beautiful	watch.PRS3SG	houses
“He/she is watching beautiful houses.”		

It is usually impossible in English, where the article or demonstrative governs the DP. Luvian does not exhibit this type of transformation.

## §2. Previous studies on the Luwian noun phrase

A study of the internal structure of the noun phrase (henceforth: DP/NP) in hieroglyphic Luwian was published by Bauer in a recent monograph (2014). Her investigation, which was rigorous and based on a solid amount of evidence, was mostly related to the internal order of the elements that can build DP/NPs of variable complexity, as well as to the feature of agreement, by which DP/NP composition and merge were driven. In general, the main features of the internal structure of a DP/NP can generally be described in terms of morpho-syntax (with agreement being the regular feature in nominal phrase construction), and the standard or marked order of the modified elements and of the relevant “modifiers”.

In the previous chapters, it was mentioned that Luwian is an S-O-V language, meaning that in a sentence with orthotonic nominal arguments the verbal head occupies the final available slot, following its complement(s). As demonstrated by Greenberg (1963) and by the typological tradition of linguistic studies,<sup>73</sup> most languages with a S-O-V order of the main clause constituents also feature left-branching on a more general scale. This formulation can be translated into the so-called parameter of “head-directionality”, which has been shown to be non-strictly predictable for all types of phrases and for all languages, with several intermediate types and a loose implicational pattern (cf. Polinsky 2012). Anatolian and Luwian, however, follow the rule of *surface* head-final left-branching quite strictly. This implies that the following classes of nominal modifiers tend to occur in a left position in the Luwian unmarked nominal constructions:

1. Attributive adjectives, including attributive participles (e.g., *ARHA-tilis al(a)wa(n)nis* “foreign(?) enemy”;<sup>74</sup> *wasammi wanatti* “to the **beloved** wife”<sup>75</sup>);
2. Demonstrative modifiers (e.g., *za waniza* “**this** stele”<sup>76</sup>);

<sup>73</sup> For a general reference-work on syntactic typology, including a history of related studies, cf. Primus 2001.

<sup>74</sup> BABYLON 1, § 12, Hawkins 2000, 392ff. Text: | *ARHA-ti-i-li-sa* |*la/i-la/i/u-ni-sa*-<sup>?</sup>.

<sup>75</sup> KARKEMIŞ A11b+c, §34, Hawkins 2000, 104. Text: BONUS-sa-mi-i FEMINA-ti-i.

<sup>76</sup> KULULU 3, §6, Hawkins 2000, 491. Text: || *za STELE-ni-za*.

3. Genitive DP/NPs (e.g., **REGIO-niya(s)si nanis** “lord of the country”<sup>77</sup>);
4. Orthotonic possessive adjectives (e.g. **aminzi tatinzi** “my fathers”<sup>78</sup>);
5. Quantifiers (including numerals and – in several cases – the adjective *tanima/i-*; e.g., **1 manas** “1 mina”,<sup>79</sup> **taniminzi massaninzi** “all the gods”<sup>80</sup>).

In light of Bauer’s study (2014), it can be added that the modifiers that occur to the right of the head noun generally relate to the following classes of phenomena:

1. Adjectives in predicative position (but a predication, obviously, is not a DP/NP);
2. Modifiers (adjectives, adjectival phrases or demonstratives) which are informationally less prominent than their head nouns;
3. Possibly non-anaphoric demonstratives, which may be interpreted as less prominent than the modifier noun and simply fall into the category in the previous point;
4. The rarely attested cuneiform Luwian adjectival quantifier *punata/i-* “all, every”, and its Iron Age continuant hidden behind the logogram L430 (cf. Bauer 2014, 101; see also §7. below);
5. A few semantically specific types of modifiers, e.g., the accusative of stuff or matter (**2 mananzi ARGENTUM-za** “two minas of silver”<sup>81</sup>), that are, however, sporadically attested in the corpus.

Compared to Hittite, which requires, for instance, that some types of non-predicative participles are postposed (see Rieken 2018 for details), the application of left-branching seems to be stricter, thus making

<sup>77</sup> KARKEMIŞ A2+3, §19, Hawkins 2000, 110ff. Text: | REGIO-ni-ia-si DOMINUS-ia-sa. Cf. Oreshko 2014 on the phonetic interpretation of the Luwian words for “lord” and “brother”.

<sup>78</sup> KARKEMIŞ A11b+c, §8, Hawkins 2000, 103ff. Text: mi-i-zi-’ | tá-ti-i-zi.

<sup>79</sup> CEKKE §12, Hawkins 2000, 145ff.; Giusfredi 2010, 182. Text: 1 SCALPRUM-sa.

<sup>80</sup> ÇİFTLİK §11, Hawkins 2000, 449ff. Text: OMNIS-mi-i-zi DEUS-ni-i-zi.

<sup>81</sup> CEKKE §8, Hawkins 2000 145ff; Giusfredi 2010, 183. Text: 2 (SCALPRUM)ma-na-zi ARGENTUM-za.

Luwian one of the most regular languages combining an S-O-V order of major sentence constituents with a modifier-head order in the DP/NP.

### §3. Non-relational attributive adjectives and participles

The regular position of Luwian attributive modifiers is prenominal. Participles that have attributive functions also seem to regularly occur pre-nominally. The cases in which the Luwian adjectival and participial modifiers occur postnominally, on the other hand, are in a minority and require to be discussed from a syntactic and informational point of view. Bauer's conclusion (2014, 225ff.) is that the restrictive or non-restrictive nature of modification is a poor criterion, as it is very loosely coupled with pre- or postnominal positioning: working on both possessive modifiers and non-possessive ones, she provides examples that prove that, in most cases, restrictiveness is hardly assessable as such. Furthermore, the length of the chain of modifiers, which are referred to a nominal head does not immediately dictate a pre- or postnominal position, as it will shown with regard to the observation of both the hieroglyphic and the cuneiform corpora (cf. below, §3.1–2.). However, the value of this result should not be overestimated: it is important to stress that a large majority of Luwian complex DP/NPs featuring more than one adjective, and virtually every hierarchically nested adjectival phrase (AdjP) currently attested in the corpus, usually include at least one possessive or genitival adjective. In other words, while adjectives and chains of adjectives are fairly well represented in the corpus, most of them feature relational figurative or proper possession.

In order to try to reduce the impact of this imbalance, genitival adjectives, possessive adjectives and true inflected genitives will be labelled here as relational modifiers, defined following the pioneering work by Bally (1944), and kept separated from non-relational ones. Genitives and relational modifiers are semantic selectors of a relationship, which undergo some positional constraints in several modern languages.

The present section of this chapter will offer a discussion on the few multi-adjectival chains that do not contain relational modifiers (in other words, that do not contain genitival or possessive adjectives). Multi-adjectival chains that, on the contrary, do contain such elements will be

discussed below, in the section §4.

### §3.1. Prenominal attributive participles and adjectives

With respect to grammaticality, in the large majority of cases, the modifiers on the DP/NP level, and especially those occurring in the attested corpus of Luvian, are optional elements and may be described as adjuncts. Indeed, since Luvian has no articles and, as was argued, no overt syntactic elements for checking a feature related to determination or definiteness, it uses both definite and indefinite bare inflected singulars and plurals as verbal arguments: a trait fairly uncommon in the modern languages of the Indo-European family. Languages that employ articles or demonstratives as determiners generally require them in order to produce a grammatical argument at least when the substantive is singular (*I read the book* versus *\*I read book*),<sup>82</sup> while languages such as Luvian do not. Therefore, in Luvian, from a distributional and hierarchic perspective no category of modifiers appears to be *intrinsically* compulsory in the argumental DP/NP, which obliterates the *structural* distinction between “determination” and “modification”. In general, modifiers are syntactically optional elements added to the NP level. This produces, in Luvian, a variable order of elements, when compared to languages such as English, where postnominal adjectivation is simply impossible. In terms of a plain functionalist approach, it may be sufficient to state that there is no grammatical *need* for any attributive element of Luvian to occupy a specific slot of the phrase, as the relevant syntagmatic categories depend on the nominal head and are assigned by it (for a structural discussion, cf. also Giusfredi 2017b). Therefore, the order [<sub>Adj</sub> adjective][<sub>N</sub> noun], which is typologically prevalent, is unmarked, although altered orders are also grammatical and can be used to represent different types of informational markedness.

The standard pattern [<sub>Adj</sub> adjective][<sub>N</sub> noun] is highly prevalent in Luvian, representing about 85% of the cases of two-element modified NPs attested in the whole corpus.<sup>83</sup> The figure drops to about 75%

<sup>82</sup> Cf. Lyons 1999.

<sup>83</sup> Data based on the materials collected for the project SLUW, that received funding from the European Union’s Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No 655954, <http://luwiansyntax.info>; on the web-based Annotated Corpus of Luvian

(which matches almost perfectly Bauer’s 2014 estimates for hieroglyphic Luwian) for all modified NPs (with two or more elements). Statistically, the difference in the figures for modified DP/NPs and DP/NPs that include more than one modifier (e.g., a second adjective, or a demonstrative) is moderate and hardly relevant to the evaluation of the positions occupied, which confirms Bauer’s conclusion (2014, 126) that the phrasal length and complexity of the modifier(-chain)s do not simply and immediately influence their tendency to occur pre- or post-nominally. However, as I will show, a more fine-grained distinction can be proposed if one separates the adjectival chains containing a relational modifier from the infrequent ones that do not (see §3.2. and §4. below). As for simple modification, in a fashion similar but not identical Hittite (Hoffner and Melchert 2008, 271 and 339f., §17.5 and §25.41), the unmarked prenominal position appears to be the same for proper adjectives and for attributive participles (Bauer 2014, 124ff.), as shown in these examples of DP/NPs from the hieroglyphic and cuneiform Luwian corpora:

- [1a]     *muwattallin*            *warpi*  
           mighty.ACC.SG        courage(?).ACC.SG  
           “mighty courage (vel sim.)”<sup>84</sup>
- [1b]     *apparantin*            *arin*  
           future.ACC.SG        time.ACC.SG  
           “future time”<sup>85</sup>
- [2a]     *wasammis*                    *hudarlis*  
           be.good.PTCP.NOM.SG        servant.NOM.SG  
           “good servant”<sup>86</sup>
- [2b]     *dupaimmin*            *lalin*  
           beat.PTCP.ACC.SG        tongue.NOM.SG  
           “wounded tongue”<sup>87</sup>

Texts (ACLT) by Ilya Yakubovich, <http://web-corpora.net/LuwianCorpus/search/>, accessed in January 2018, and on the corpora by Starke 1985; Hawkins 2000; Peker 2016.

<sup>84</sup> KARKEMIŠ N1, §4, Peker 2016. Text: | FORTIS | L273. Parallel text A4b, §4, Hawkins 2000, 80ff. Note that Yakubovich (2016b, 75) now translates *warpi*- as “weapon”.

<sup>85</sup> Ritual fragment KUB 35, 129 ii 29, Starke 1985, 414. Text: ap-pa-ra-an-ti-en a-ri-in.

<sup>86</sup> CEKKE §1, Hawkins 2000, 145ff. Text: wá/i-sa||-mi-sa SERVUS-lá/i.

In hieroglyphic Luwian, constructions similar to the ones illustrated in [1a] and [2a] show an extremely high prevalence and are simply the regular ones (cf. Bauer 2014, 119ff., for further figures). As for cuneiform Luwian, including parallel and duplicate texts, construction [1b] occurs 150+ times in the corpus, while construction [2b] is only attested 30+ times<sup>88</sup> (because of the rather limited number of attested participles).

Fine-grained representations of the modifier hierarchies in Romance languages and in Latin have been proposed to exist in modern and ancient languages; to mention just a few very important works on this subject, one may consider Cinque (ed. 2002; 2005), Poletto (2012), Cardinaletti (2016), Giusti and Iovino (2011 and 2016), Giusti and Oniga (2006). As for Luwian, the core structure of the above patterns apparently involves an (iterable) Adjectival Phrase followed by the position occupied by the noun.

Consistent with the observation that the complexity of the chain of modifiers does not strictly imply a positional alteration, the Luwian complemented participles also seem to occur preminally with stunning regularity, while the local order of head and ablative complement *within* the participial adjectival phrase features left-branching:

[3a]      *massanati*              *azammis*              *CAPUT-tis*  
             god(s).A/I              beloved.NOM.SG      person.NOM.SG  
             “Prince/person beloved by the god(s).”<sup>89</sup>

This pattern is absolutely prevalent among attributive participles in the hieroglyphic corpus (cf., e.g., MARAŞ 1, §1 2x; KARKEMIŞ A11b+c, A15b, §1), with virtually no divergent pattern clearly attested. It

<sup>87</sup> Ritual KUB 32, 9 iii 19, Starke 1985, 118ff. Text: du-ú-pa-im-mi-in EME-in.

<sup>88</sup> Data based on the materials collected for the SLUW project, <http://luwiansyntax.info>; on the web-based Annotated Corpus of Luwian Texts by Ilya Yakubovich, <http://web-corpora.net/LuwianCorpus/search/>, and on the corpora by Starke 1985; Hawkins, 2000; Peker 2016.

<sup>89</sup> KARKEMIŞ A6, §1; Hawkins 2000, 124ff. Text: DEUS-na-ti-i (LITUUS)á-za-mi-sa <CAPUT?>-ti-i-sa.

generally occurs in the genealogical sections of the inscriptions, where the titles and epithets of rulers and kings are spelled out. It is syntactically represented as follows (a discussion of the structural position of the ablative agent inside the phrase will not be attempted, as the corresponding ablative complement with finite passive predicates is not attested and cannot be compared):

[3b]      [ADJP *massanati azammis*] [NP CAPUT-*tis*]

Ignoring, for the moment, a more fine-grained structure within the area hosting the adjectives, one may note that the surface left-branching of modifiers, including attributive complemented participles, is quite strict. A good example is provided by the inscription MARAŞ 1, § 1, in which a long chain of modifiers, coordinated with each other by null conjunction (see § 8. below), occurs preminally:

[3c]      *massanati*                      *azammis*  
             god(s).A/I                      beloved.NOM.SG  
             CAPUT-*tati*                      *unimmis*  
             person.A/I                      known.NOM.SG  
             *irhati*                              *tumantimmis*                      *hantawatis*  
             boundary.A/I                      heard.NOM.SG                      king.NOM.SG  
             “King beloved by the gods, known by the people(s), famous  
             abroad”<sup>90</sup>

The examples of complemented participles, presented so far, belong to the hieroglyphic corpus. The cuneiform corpus, on the other hand, contains different types of texts (see Chapter 1), with the constructions under discussion nowhere to be found. There are of course cases of predicative participles. Their position, however, is not that of a modifier, nor does it concern the DP/NP-structure. The *internal* structure of predicative participial AdjPs, on the other hand, confirms left-branching of the ablative complements, as in the following example (in which the ablative probably encodes a provenance, rather than an agent, but occupies the usual structural position):

<sup>90</sup> MARAŞ 1, § 1; Hawkins 2000, 262ff. Text: DEUS-na-ti (LITUUS)á-za-mi-sà CAPUT-ta-ti <(LITUUS)>u-ni-mi-sa · 4 | FINES-ha-ti || AUDIRE-mi-sà REX-ti-sà.

- [3d]     *war-sa*                    *-tta*     *hapati*    *nanamman*  
           water.N/A.SG            PTCL     river.A/I   carried.N/A.SG  
           “The water is carried from the river.”<sup>91</sup>

### §3.2. Postnominal adjectives and participles

As far as non-relational modifiers are concerned, they very rarely occur in the postnominal position. Before examining their behaviour in detail, it is necessary to discuss a case of postnominal cuneiform Luwian adjectivation, as represented by a logographic writing corresponding to the sequence [<sub>N</sub> noun][<sub>ADJ</sub> adjective]. In the corpus, only one such case was identified for the present study, which is also the only case in which an entire DP/NP is consistently written logographically without Luwian phonetic complementation. Consider the following parallel examples from Kizzuwatna Luwian ritual passages: the first one is the case under discussion, while the second a structural parallel from a fragmentary tablet, from which it is sufficient to only quote the relevant DP/NPs:

- [4a]     *anta*    *-pa -tta*   *arlanuwatta*   *malhassanza(n)*    *naniya*  
           inside   *pa*   PTCL   replace.PST3SG   of.ritual.D/L.SG    lord.D/L.SG  
           *huitwalahi(ta)ti*   *annarummahi(ta)ti*   MU.KAM<sup>HLA</sup>   GÍD.DA  
           life.A/I            virility.A/I            years            long  
           “‘She replaced (them) for the beneficiary of the ritual with life, virility, long years.”<sup>92</sup>
- [4b]     *hattulahi(ta)ti*   *massanassanzati* [*wassarahititi*]   *arrayati*    *ussati*  
           health.A/I    of.god(s).A/I    favour.A/I    long.A/I    year.A/I  
           “...with health, with the favour of the gods, with long years...”<sup>93</sup>

All of the other occurrences of the attribute *arraya-*, “long”, in the cuneiform Luwian corpus, are prenominal, with the sequence

<sup>91</sup> KUB 35, 54 iii 17. Starke 1985, 65ff. Text: [(w)]a-a-ar-ša-at-ta ÍD-ti [na-n]a-am-ma-an.

<sup>92</sup> Ritual KUB 35, 45 ii 7f., Starke 1985, 151ff. Text: a-an-ta-pa-at-ta a-ar-lanu-wa-at-ta SÍSKUR-aš-ša-an-za-«an» EN-ya (8) hu-i-it-wa-la-hi«-ta»-ti a-an-na-ru-um-ma-hi«-ta»-ti MU.KAM<sup>HLA</sup> GÍD.DA.

<sup>93</sup> Fragmentary Ritual KUB 45, 43 ii 39f., Starke 1985, 143ff. ha-at-tu-la-hi«-ta»-ti ma-aš-ša-na-aš-ša-an-za-ti (40) [wa-aš-ša-ra-hi-ta-ti] a-ar-ra-ya-ti uš-ša-a-ti.

MU.KAM<sup>HLA</sup> in [4a] being the only exception. The phenomenon at work in this case is not truly syntactic: the sequence MU.KAM<sup>HLA</sup> GÍD.DA is a formula of the ritual lexicon, while the inverted order derives from the sumerographic convention. As Sumerian featured NP-internal right-branching, the sumerographic DP/NP maintains the Sumerian graphic word order. The overwhelming evidence supporting a correspondence with *arraya- ussa/i-* (five syllabic occurrences versus the sumerographic one in [4a]) suggests that the reading of the logographic ablative sequence MU.KAM<sup>HLA</sup> GÍD.DA was indeed *arrayati ussati*, regardless of the graphic sign order, which does not correspond with the real order of words.

Regarding the hieroglyphic Luwian documentation, logography derives, in principle, from an inner-Anatolian scribal practice. Therefore, logographic modifiers, which are usually combined with phonetic complements, do not exhibit any aberrant behaviour with respect to the position they occupy, which is generally prenominal.

Excluding the case in [3a], which is the result of a graphic convention, postnominal adjectival modification is uncommon in Luwian. As previously stated, Bauer (2014, 126) excluded the fact that the length or complexity of adjectival phrases influenced the position they occupy with respect to the head, before proceeding (2014, 229ff.) to investigate semantic and functional criteria. It is important to clarify, on the metalinguistic level, that functional criteria are informational in nature (saliency, prominence, focusing); semantic criteria, on the other hand, regard inherent relationships (e.g., the restrictive or unrestrictive scope of modifiers): the two levels interact with each other and may even coincide in a unified account of grammar, although on a descriptive level they should not be confused with each other.

Following Bauer's example, before investigating the functional and semantic reasons for an unmarked word order in modified DP/NPs, the criterion of phrase complexity will now be re-examined for non-relational modifiers only. There are only two clear examples of non-possessive and non-genitival multiple modification. Both of them were noticed by Bauer (2014, 126ff.) and discussed under the very cautious label of *stacked* modifiers. In addition, both of them are postnominal.

[5a]	8	<i>hantawatis</i>	<i>apparanzi</i>	<i>hantilinzi</i>	<i>-ha</i>
	8	king.NOM.SG	lesser.NOM.PL	important.NOM.PL	<i>ha</i>

“8 kings, lesser (ones) and higher-ranked (ones)”<sup>94</sup>

[5b] *Alwarati -ha -wa -mu zurni*  
 A.A/I *ha* QUOT I.D/L horn.N/A.PL  
*unas sanawaya uraya harwanni*  
 drinking.gen good.ACC.PL big.ACC.PL send.IMP2SG

“Also, from the city of Alwara send me drinking-horns, good and large”<sup>95</sup>

The position of the numeral “8” in example [5a] is prenominal and seems to have scope over the whole modified phrase. Note, however, that the rule that applies here places a singular noun after the numeral, but the two attributes that follow the head noun are inflected in the plural. Therefore, their pattern of agreement seems not to be selected syntactically by the verbal head, such that it is thus very likely that they actually represent a sort of apposition rather than proper elements of the modified DP/NP. As for [5b], the sequence *zurni unas* may be a similar case, or it may represent a case of compounding; in either case, the whole NP may very well be raised to a left prominent position. Even if [5a] represented a genuine case of a modified DP/NP, two (doubtful) examples would definitely not be enough to assume that the prosodic weight and the length of the adjectival phrase had a role in determining its position. Therefore, this phenomenon is better explained in terms of informational prominence of the salient noun, since in both examples, the “kings” and the “horns” are introduced in the text for the first time. Semantically speaking, however, it is very hard to judge whether the appositional adjectival phrase [*apparanzi hantilinzi-ha*] is restrictive or unrestrictive. In [5b], the attribution is certainly restrictive, as it deictically refers to the shared knowledge about specific horns, which are to be located and sent.

Bauer’s other examples of hieroglyphic Luwian “stacked” participles, on the other hand, behave exactly the other way around: they are all

<sup>94</sup> TOPADA §3; Hawkins 2000, 442ff. Text: 8 REX-ti-sa POST+ra/i-zi/a FRONS-la/i/u-zi/a-ha.

<sup>95</sup> ASSUR Letter F+G, §36; Hawkins, 2000, 537ff. Text: a-la-wa/i-ra+a-ti-ha-wa/i-mu(URBS) | (“CORNU”)zú+ra/i-ni || (BIBERE)u-na-sa |sa-na-wa/i-ia MAGNUS+RA/I-ia | VIA-wa/i-ni-i. For a recent analysis of the Luwian adjective and adverb *sannawa/i(-)*, “good, well”, see the contribution by Yakubovich 2016a.

prenominal, as are the regular unmarked attributive modifiers. Regarding the internal order of the elements, both the semantic and the structural analysis of the contexts confirms that these cases can be easily explained in terms of rhetorical constructions. In all of them, MARAŞ 1, §1, KARKEMIŞ A6, §1, A7, §14 and BOYBEYPINARI 2, §5, the NP is accompanied by a chain of appositional participles which constitutes the official or royal title of a ruler. For instance, in the BOYBEYPINARI example, the participles modify the title of the River Lord Azamis (cf. Giusfredi 2010, 101ff.).

- [6] *amis*      *tatis*      *Azammis*      *massanati*  
 my.NOM.SG father.NOM.SG A.NOM      god(s).A/I  
*azammis*      *tiwadammis*  
 loved.NOM.SG      blessed.NOM.SG  
*Sara(l)lizzas*      *Zukitizza(s)*      *-ha*  
 S.of.NOM.SG      Z.of.NOM.SG      *ha*  
 FLUMEN.DOMINUS-*yas*  
 river-lord.NOM.SG  
 “My father Azammis, beloved by the gods, (man) of the Sun-god, River-Lord of Saralla and Zukita”<sup>96</sup>

An apposition containing a title, given its very nature, is structurally detached from the context, while its semantic and informational prominence is locally defined (and highly formulaic). Therefore, the order in which the attributes of rulers occur in official titles, which are mostly, but not exclusively, attested at the beginning of inscriptions, should be explained as being dependent on rhetorical reasons, with the epithets relating to divine favour coming first.

Now that the special issues and exceptions have been addressed and excluded from the picture, it is time to turn to the proper examples of postnominal non-relational adjectivation, which are extremely infrequent. The cases mentioned by Bauer (2014, 233f.), in which a divine or personal name is followed by an epitheton (the clearest one

<sup>96</sup> BOYBEYPINARI 2, §5; Hawkins 2000, 335ff.. Text: za-pa-wa/i i-sà-tara/i-ta-za || za-ha MENSA-za á-mi-sà || 1 tá-ti-sa <sup>1</sup>á-za-mi-sá DEUS-na-ti (LITUUS) á-za-mi-sa SOL-tà-mi-sá SUPER<sup>1</sup>-la/i-za-sa(URBS) zú-ki-ti-za-ha(URBS) FLUMEN.DOMINUS-ia-sa || (PES)u-pa-tá.

being ÌVRiz 1, §1), hardly deserve discussion from a structural perspective. They are poor material for the purposes of syntactic evaluation: modifiers may be postnominal because of the informational or semantic prominence of the name, or simply for graphic reasons, or because they worked as appositions. Legitimate examples of postnominal adjectivation, however, are attested in the ASSUR Letters (e.g. Letter B, §5):

- [7]           ...*waramma*                                 *tapasalaya*...  
                  possession(?).N/A.PL                 *t*.N/A.PL  
                  “*t*. possessions(?)”<sup>97</sup>

Here, the semantic prominence of the word *wara(m)ma-*, a *terminus technicus* of the lexicon of commercial transactions used by the author of the letter, can very well explain the reason for the nominal fronting. Moving onto cuneiform Luwian, the corpus offers no clear examples of complex postnominal adjectival phrase, coordinating or hierarchically combining adjectives and not including relational modifiers.

Informational fronting within the DP/NP involves a dedicated functional position, similar to the DP-internal agreement-phrase in Cinque 2005, that allows the movement of the noun.<sup>98</sup>

If one recalls that the complemented participles (see §3.1. above) occur prenominally in a consistent fashion, it is once again safe to confirm that

<sup>97</sup> Hawkins 2000, 534ff. Text: (“L286.L31”-’)wa/i-ra+a-ma LEPUS-pa-sà-la-ia. Hawkins’s translation “urgent requests” is no longer defensible; I follow Melchert, *pers. comm.*, in tentatively translating *wara(m)ma* as “possessions(?)”.

<sup>98</sup> Both phenomena occur cross-linguistically. Incorporation captures the cases in which N moves, but its complement remains *in situ*, e.g. Italian:

*tremenda paura del buio* > [<sub>N</sub> *paura*] [<sub>Adj</sub> *tremenda*] [<sub>NP</sub> e<sub>N</sub> [<sub>compl</sub> *del buio*]]  
 terrible fear of dark  
 “terrible fear of the dark”

Phrasal movement involves the fronting of the whole DP/NP, e.g. Italian [<sub>NP</sub> *paura del buio*] [<sub>Adj</sub> *tremenda*], which is also grammatical. In Luwian, the extreme rarity or the possible lack of elements that occur in (compl,N) prevents a better clarification of the type of movement involved.

the linear length, and structural and prosodic weight of the adjectival phrase play no role in assigning the position of the non-relational modifiers with respect to the nominal head. If a tendency existed, it may be reflected by the postnominal position of stacked pure attributes in [5a] and [5b], but the examples are problematic and far from sufficiently numerous. Furthermore, even if trustworthy, they would also admit to a satisfactory functional explanation in terms of informational prominence.

#### §4. Relational modifiers

While the traditional morphosyntactic definition of “genitival adjective” was maintained in Chapter 1, in order to discuss the syntactic and semantic behaviour of attributes it will be useful to inherit the definition of relational adjective from Bally’s metalanguage (1944) and adapt it to Luwian, where a set of DP/NP-internal attributes replace genitives syntagmatically, as well as express the wide set of relationships that genitives can also crosslinguistically express (on which cf. Carlier and Verstraete, eds., 2013).

A peculiarity of Luwian, as regards the distribution and syntactic behavior of relational modifiers, is the possibility for genitival adjectives to head a chain of further genitives (cf. Bauer 204, 165–179; also Neumann 1982). The most extreme example of a complex chain of embedded relational modifiers of this class is MALATYA 1:

- [8]      *zaya*                      *-wa*      *sasaliya* *Halpasulupiyas*  
 This.N/A.PL                      QUOT      s.N/A.PL      H.GEN  
*Taras*                      *hastalliyas*                      *Malatiyas* DOMINUS-*yaya*  
 T.GEN                      of.hero.NOM                      M. GEN      lord.of  
*hamsaya*      *Wasuruntiyas*      *nimuwiyaya*                      *hantawatiyas*  
 grandson.of W.GEN                      son.of                      king.of  
 “These *s.* are of Halpasulupi, grand-son of Tara, the hero, lord of Malatya, son of Wasuruntiya, the king.”<sup>99</sup>

<sup>99</sup> Hawkins 2000, 319f. Text: za-ia-wa/i (L262)sa-sa-li-ia TONITRUS.HALPA -pa-AVIS<sub>3</sub>-sa <sup>1</sup>CRUS+RA/I-sa HEROS Ma<sub>x</sub>.LI<sub>x</sub>-i(URBS) DOMINUS-ia-ia

Remarkably, the distribution is not random: true genitives are used for the personal names (even though genitival adjectives derived from personal names are attested in the general Iron age corpus), while the appositions (or less likely postposed modifiers) are *-iya-* genitival adjectives (I thank C. Melchert, *pers. comm.*, for this important observation). Therefore, while genitival adjectives can replace true genitives syntagmatically, they do alternate in complex chains, probably based on semantic criteria.

#### §4.1. The Luwian relational modifiers

The group of relational modifiers will include the following morpho-syntactic categories:

1. Possessive adjectives (e.g. *ama/i-* “my”);
2. Inflected genitives (e.g. *Suhisi* “of Suhis (personal name)”)
3. Genitival or quasi-genitival adjectives with these endings:
  - a. *-alla/i-*, builds both possessive and general relational adjectives;
  - b. *-(i)zza-*, builds adjectives expressing a relation of geographic provenance;
  - c. *-wann(i)-*, builds adjectives expressing a relation of position or provenance;
  - d. *-iya-*, builds relational and in some cases possession-marking adjectives;
  - e. *-assa/i-*, builds possession marking adjectives, which can replace clear instances of nominal genitives.

In several languages, this class of modifiers behaves differently from non-relational adjectives with respect to the positional constraints. The distinction is not strictly lexical and involves rules for disambiguation: Italian *popolare* can mean “of the people” as in *l’opinione popolare* “the opinion of the people”, but when used prenominaly, as in *una popolare opinione* “a widespread opinion”, it can only be interpreted as a non-relational one (unless, of course, a very marked word order is imposed for rhetorical reasons, producing a border-line grammatical and semantically ambiguous sequence). However, whether relational modifiers in Luwian could or could not be used in regard to non-

INFANS.NEPOS-ia MONS.CORNU<sup>2</sup>.CERVUS<sub>3</sub>| INFANS-mu-wa/i-ia-ia  
 REX<sup>2</sup>.

relational functions is impossible to evaluate, given the limits of the available corpus and the fact that the syntactic competence of the speakers is obviously impossible to access.

#### §4.2. The position of relational modifiers

Relational modifiers in Luwian are decisively prenominal and tend to precede non-relational ones. The absolute majority of inflected genitives of hieroglyphic Luwian, and virtually all the ones in the Cuneiform corpus, are left-branched. Bauer’s (2014) survey identified no more than three cases of postnominal inflected genitives compared with ca. 70 prenominal ones in the hieroglyphic Luwian corpus. An extension of the query to the Bronze Age cuneiform corpus did not highlight any clear competing patterns: genitives consistently precede the head noun throughout the corpus. A close look at the three examples of postnominal inflected genitives allowed Bauer (2014, 250f.) to notice that all of them were somewhat dubious.

The phrase *kummaya* DEUS.DOMUS-*sa*(?), translated as “holies of the temple”, in KARKEMIŠ A11a, §14, is epigraphically uncertain. The sign SA may belong to the first word and not to the second, as illustrated in the following example, modified and annotated starting from the handcopy by Hawkins (2000, Plate 10):

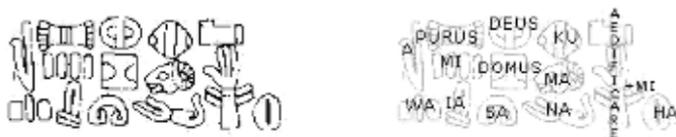


Figure 5: Karkemiš A11a §14, detail

If the phrase were to be read *kummayasa* DEUS.DOMUS (PURUS.MI-*ia-sa* DEUS.DOMUS), then the first word would be a left-aligned genitival adjective (“temple of the holies”). A third possibility exists and deserves to be added to the one mentioned in Bauer (2014, 251). The reading order could also be *kummaya* DEUS.DOMUS-*sa*(?), but DEUS.DOMUS-*sa*, as a neuter dental stem, could also be an accusative neuter plural (“holy temples”), with *kummaya* in fact being an adjective. The second dubious occurrence of a postnominal genitive is the phrase

*zurni unas sanawaya uraya* “horns of drinking, good and large”, in the ASSUR letter F+G, §36. Here the form *unas* is the genitive of the verbal noun from the verb *u-*, “to drink”. As mentioned above (cf. §3.), while the two non-relational adjectives do occur postnominally (reflecting an informational prominence of the head noun), the hapax genitive *unas* seems to refer more closely to the noun. This may be a case in which *unas*, rather than being moved, is undergoing morphological change towards compounding.

The last occurrence of a postnominal genitive identified by Bauer is probably a genuine case, but it is embedded in a complex stratified chain of relational elements (SHEIZAR, §1). The whole phrase is an apposition identifying the author of the text, a woman, who is the wife of a Syrian ruler:

- [9]      *Kupapiyas*            *Taitasi*    *wanattis*            *hastallis*  
           *K.NOM*                *T.GEN*    *wife.NOM.SG*        *hero.GEN.SG*  
           *Walasatinisi*  
           *W.GEN*  
           “Kupapiyas, wife of Taita, the Hero, the (man) of Walastin”<sup>100</sup>

Bauer (2014, 268) notices that a prenominal collocation of the genitive *Walasatinisi* would be possible, which would result in the ordering: *Taitasi Walasatinisi hastallis wanattis*. She then observes that Luwian is “not strictly configurational”. While this conclusion is certainly debatable (depending on what the term “configurationality” means in different frameworks), what is true is that a marked order of words and sub-constituents is possible in all languages as long as no syntactic constraint is violated. As previously stated, Luwian had no apparent *grammaticality*-constraint that prevented postnominal modification, while making use of non-standard orders of modifiers in order to mark functional informational prominence. In this case, the hierarchic nesting of the phrase has a core nominal phrase [<sub>GenP</sub> *Taitasi*] [<sub>N</sub> *wanattis*], followed by a twofold apposition, which is adjoined on the level of the genitive *Taitasi* and agrees with it morphosyntactically: [<sub>GenP</sub> *hastallis*] [<sub>GenP</sub> *Walasatinisi*].

<sup>100</sup> SHEIZAR §1; Hawkins 2000, 416ff. Text: EGO-wa/i-mi ku-pa-pi-ia-sa<sup>1</sup>ta-i-ta-si FEMINA-ti-sa HEROS-sa wa/i-la/i-sa-ti-[ni-si](REGIO).

Moving on to genitival adjectives, they also behave as standard modifiers and tend to occur prenominal in the vast majority of cases. The prevalence of postnominal ones, however, is slightly higher than that of proper genitives, with 12 tokens identified by Bauer (2014) in the hieroglyphic texts. The cuneiform corpus seems to contain very few instances of this pattern, but many contexts are too fragmentary to identify the agreement of modifiers and head nouns.

In general, however, the alterations of the relative order of elements – be they relational or non-relational modifiers inside a nominal phrase – is a local fact, unrelated to clause-level phenomena, and will therefore be explained in terms of phrase-internal prominence (see §9. below).

#### §4.3. The problem of possessive-determination

A well-known problem, as outlined by Lyons (1999), is the so-called determiner status of possessive elements, be they adjectives or other types of modifiers, including genitives. Lyons showed that, in some languages, the juxtaposition of a possessive or genitival element and a determiner produces ungrammatical strings, while other languages tolerate or require it. A functionalist interpretation of this difference may go as follows: *two determiners cannot be stacked, so if the possessive element is a determiner, it cannot interact with another determiner*. Functional assessments require structural interpretation; therefore, Lyons' work is presented within a generative framework, which inherits Abney's DP-hypothesis (1987). From this perspective, the position in which the trait of definiteness is assigned to a nominal (thus producing a definite or indefinite syntactic argument) should coincide with a single structural position.

As has been discussed earlier in this chapter, no position will be taken in the NP versus DP debate. Still, Luwian does present some features of Bošković's NP languages (2008). In particular, its adjectival demonstratives distributionally and syntactically behave as optional modifiers and they are not required in order to allow argument licensing of the DP/NP. Therefore, the prediction is that possessives and demonstratives (and other candidates for the role of syntactic determiners) will be able to stack within a modified DP/NP.

Such a prediction is confirmed by the occurrences attested in the corpus, for instance in KARKEMIŠ A18e §§4–5:

[10]	<i>za</i>	<i>aman-za</i>	<i>taru-sa</i>	...	<i>saniti</i>
	this.N/A.SG	my.N/A.SG	statue.N/A.SG	...	remove.PRS3SG
	“...removes this statue of mine” <sup>101</sup>				

The number of attestations for this construction is limited: when running queries for the present study, it was possible to identify five, all of which are in Iron Age hieroglyphic texts (KARKEMIŠ A18e §§4–5 twice; MALPINAR §5; ASSUR Letter E §9; ALEPPO 7 §9).<sup>102</sup> They are, however, distributed in different areas and centuries, while matching some rare, but definitely attested, sequences of Hittite (e.g., the partly logographic phrase *apas-wa* DUMU-*YA* “that son of mine” in VBoT 58 i 29f.; cf. Puhvel 1983, 184).

Bauer (2014) concludes that these sequences (which she does not compare with similar Hittite ones) may indicate that possessives in Luwian were attributes rather than determiners; she also cautiously points to the limited amount of evidence. In my opinion, the very distinction between attributive and determiner-like possession is meaningless in the syntactic description of Luwian, given that in this language *neither* possessives *nor* demonstratives are determiners, and articles do not exist.

## §5. Demonstratives and indefinites

In this short section, it will be dealt with demonstratives and indefinites as they are employed adjectivally as modifiers within a DP/NP. Their use and function as pronouns (and the formal and etymological relationship between indefinites and other *wh*-derived elements) will be discussed in Chapter 3. When they occur inside a nominal phrase, both demonstratives and indefinites may of course have a referential function that transgresses the syntactic limits of the clause they belong to: in Chapter 6 I will argue for an extension to Luwian of Huggard’s semantic interpretation of the relative and conditional subordinates of Hittite, suggesting that a large number of pseudo-hypotactic structures of

<sup>101</sup> Hawkins 2000, 194f. Text: | za á-ma-za (“STATUA”)⟨ta⟩-ru-sa ... | (“SA<sub>4</sub>”)sa-ni-ti.

<sup>102</sup> Cf. Hawkins 2000, pp. 194ff., 340ff., 535f.; Hawkins 2011, 48f.

Luwian present a structurally similar pattern.

As proposed in Giusfredi (2017), in a Luwian sentence the DP/NP does not need any overt determiner to be licensed as a verbal argument. Consider this example from the ritual KUB 35, 102+103 ii 15f.:

- [11]     *annis*                    *-kwa*    *-ti*        *parnanza*  
           mother.NOM.SG    QUOT    REFL        house.ACC.SG  
           *madduwati*           *papparkuwatti*  
           wine.A/I            cleanse.PRS3SG  
           ‘‘The mother cleanses the house with wine for herself’’<sup>103</sup>

Both the argument DP/NPs (*annis* and *parnanza*) and the instrumental (*madduwati*) are selected by the predicate *papparkuwa-*. They all must carry definiteness-related information and, in this very instance, they are all definite. Luwian is no isolated case, nor is Anatolian. Most ancient Indo-European languages worked in this way. It is trivial to compare article-less languages such as Latin; however, in Giusfredi (2017b) it was shown that even in Ancient Greek, in spite of the presence of articles, demonstratives still behaved as mere modifiers – even though some constraints did apply. This indicates that, in Greek, the constitution of a class of determiners derived from the grammaticalization of a class of demonstratives into articles, which did not impact on other parts of speech that in other languages *do* act as determiners (e.g., the Italian, French or English demonstratives, which cannot co-occur with articles in a DP). In Luwian, however, no trace exists of an ongoing grammaticalization of any modifier into a determiner.

The position of Luwian demonstratives is prenominal, which is the standard position of all modifiers in a semi-rigid left-branching language. Alterations to the relative order with respect to the noun can generally be explained informationally (except in case of interference, cf. Bauer 2014, 59f.; cf. also §9. below). Therefore, the cases in which Luwian produces an N-Dem order, for instance ASSUR Letter A, §12:

- [12]     *hantiya*                *-pa*        *-wa*        *-mu*        *waramma*  
           special(?).N/A.PL   *pa*        QUOT        I.D/L        w.N/A.PL

<sup>103</sup> Starke 1985, 221ff.; Text : [a]n-ni-iš-ku-wa-ti pá-r-na-an-za ma-ad-du-ú[-wa-ti] [p]a-ap-pár-ku-wa-at-ti. On particle *kwa*, see below, fn. 215.

<i>zaya</i>	<i>harwanni</i>
these.N/A.PL	send.IMP2SG
“But send me these special(?) w.'s” <sup>104</sup>	

do not relate to cases in which the noun or a different modifier, or again a modified NP, occupies the position of a *deleted* determiner (the so-called N-to-D movement), e.g., in Italian:

[13a] *La mia casa*

[13b] *Casa mia*

Every modifier on the DP/NP-level can undergo informational movement to the local left periphery, as will be illustrated for all classes of nominal modifiers below, in §9. In the case shown in [12], the NP *hantiya waramma* undergoes a leftbound movement to receive informational markedness (in this case contrastive focus, marked by *-pa*) over the deictic element *zaya*. This syntactic explanation is just a structural description of the semantic mechanics hinted at by Bauer (2014), who interprets these constructions as strategies to mark salient new information over the content of the demonstrative: indeed, the noun *wara(m)ma* is mentioned in the sentence in [12] for the first time.

Distributionally, the behaviour of indefinites is similar to the behaviour of demonstratives: just as demonstratives are not required to mark a DP/NP as definite, indefinites are likewise not necessary in order to mark it as indefinite. Semantically, however, they relate both to indefiniteness and quantification. Since the sentence-level correlative functions of co-indexed DP/NPs will be dealt with in Chapter 6, the discussion of indefinite modifiers will for now be limited to their structural and distributional position(s) inside the DP/NPs to which they locally belong.

Most Anatolian indefinite modifiers etymologically go back to *wh*-words, or, more precisely, a labiovelar *k<sup>w</sup>*-pronominal series of Indo-European. Luvian *kwisha* (Bronze and Iron Ages, attested over 45 times in both cuneiform and hieroglyphic texts) is likely to be a univerbation of a relative pronoun and the coordinating element *-ha*, thereby

<sup>104</sup> Hawkins 2000, 534ff. Text: ha-ti-ia-pa-wa/i-mu | (“L286.L317”)wa/i+ra/i-ma-’ | za-ia | VIA-wa/i-ni.

exhibiting a word-medial inflectional morphology, which in turn is easily comparable to the Latin *quisque, cuiusque*. The Luwian *kwi(h)a-* (attested only five times in late texts of the hieroglyphic corpus, four of which are pronominal, and always accompanied by a negation *not ... any*)<sup>105</sup> is probably a fully univerted version of the same word.

While the etymology of Hittite indefinites is slightly different (the compounding being based on the relative *kui-* and particles *-ki* and/or *-qa*), their positional behaviour has been explained by Huggard (2015), who hypothesizes about a prosodic deficiency in the adjectival form and a consequent inversion, locating them rather strictly after the noun or between the first nominal modifier and the noun, in a fashion similar to the one that defines the position of sentence-level clitics with respect to the first tonic constituent of a clause.<sup>106</sup> Since Huggard (2015, 73, Example and Graph 124) considers Hittite to be a DP-language, the position from which prosodic inversion is instantiated would be that of the head of the DP, with the adjectival modifier, if present, being located inside a lower NP. The interpretation of the “specifier” position of the NP as a position for attributive adjectives is not unproblematic and has been challenged in literature (and it will not be employed in this work). In any case, certainly the head of the DP is never assumed to be lexically filled in Anatolian; as usual, however, I will not enter the details of such a theoretical issue. However, by considering the position occupied by the indefinite (at least before prosodic inversion) to be the same as that occupied by demonstratives (DemP), Huggard’s explanation for the position of the Hittite adjectival indefinites is also fitting for Luwian. Consider the patterns with and without an attributive adjective, from the ASSUR Letter F+G §31 and MALPINAR §27 respectively (which, for sake of clarity, will be represented here simplifying the structure of the syntagmatic representation):

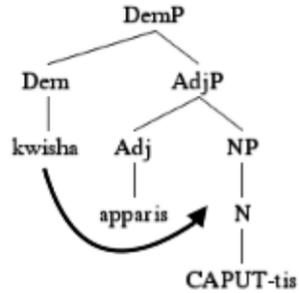
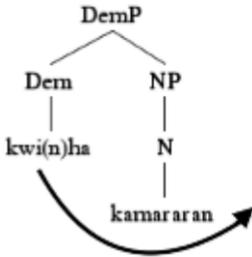
- [14]      *kamararan*              *kwinha*  
             *k.ACC.SG*                *some.ACC.SG*  
             “some *k.*”<sup>107</sup>

<sup>105</sup> ASSUR Letter C, §6; D, §5 (adjectival); F+G, §20; BOHÇA §7 and §11.

<sup>106</sup> Sideltsev (2015) proposes however a different interpretation.

<sup>107</sup> ASSUR Letter F+G, §31; Hawkins 2000, 539ff. Text: | ka-mara/i-ra+a-na |kwa/i-i-ha. See Yakubovich (2016b, 87) for a hypothesis concerning *k*.

- [15]     *apparīs*                    *kwisha*                    *CAPUT-tis*  
           lesser.NOM.SG            some.NOM.SG            person.NOM.SG  
           “some lesser person”<sup>108</sup>



## §6. Appositions

Appositions are extra-syntactic by definition, and they require no structural discussion about their positions and patterning with respect to the surrounding environment: they are juxtaposed with a constituent, while their internal structure reflects the structure of nominal phrases (including marked and unmarked patterns with respect to modification). In Luwian, they are very frequent at the beginning of royal inscriptions, where they contain the titles and genealogical information regarding the ruler or official who had the very text composed. Internally, nominal appositions behave as simple or complex nominal phrases: they exhibit a standard left-branched order of words and nested phrases, which may undergo informational alterations in order to mark prominence.

In general, however, Luwian appositions are right-located, and may even occur after the right boundary of the clause to which they anaphorically refer. A semantic distinction between restrictive and attributive appositions (such as the one formalized for Latin by Fugier 1973) is not evidently mirrored by a different structural treatment in Luwian; this, however, depends on the fact that most of the attested patterns are postponed and appear to be attributive, while clear cases of

<sup>108</sup> MALPINAR §7; Hawkins 2000, 342ff. Text: POST+ra/i-i-sa kwa/i-sa-ha-’ CAPUT-ti-sa.

restrictive appositions are hardly identifiable (a doubtful case being BOYBEYPINARI 2, §17c, cf. Bauer 2014, 300). For more discussion on the semantics of appositions in Luwian cf. Bauer (2014, 274–307).

## §7. Quantifiers and numerals

The position and behaviour of Luwian quantifiers and numerals have been studied in great detail by Bauer (2014); her research shows that numerals are strongly bound to a prenominal position, with informational inversions being much more uncommon than in the case of other modifiers. Numerals also exhibit differentiated patterns of agreement: the quantified nouns only inflect in the plural for numbers two to five; for higher numbers, they generally do not. This behaviour has been systematically detected in hieroglyphic Luwian; the cuneiform corpus is not very generous with regard to numeral modifiers; nevertheless, as noted by Bauer (2014, 95) at least the occurrence in KUB 35, 89:12' (integrated with KUB 35, 88 iii 13f.) confirms the same pattern for numeral nine:

[16]     *lalai*                     *-wa*             *9-unza*                     <sup>GIS</sup>GA.ZUM-*za*  
            take.PRS3SG             QUOT             9.N/A.SG                     comb.N/A.SG  
            “She takes 9 combs”<sup>109</sup>

As for the strong tendency among numerals to occur in prenominal position, this extends also to complex DP/NPs including other modifiers, regardless of their relational or non-relational semantics: the numeral will generally occupy the leftmost position in the phrase, having scope over the whole modified NP.

[17]     3             *ussissin*                     *hawin*  
            3             yearly.ACC.SG             sheep.ACC.SG  
            “3 annual sheep (offerings)”<sup>110</sup>

<sup>109</sup> Starke 1985, 228ff. Text: la-la-a-i-wa 9-un-za <sup>GIS</sup>GA.ZU[(M-za)].

<sup>110</sup> MARAŞ 11, §8; Hawkins 2000, 270ff. Text: 3 “ANNUS”-si-si-na OVIS(ANIMAL)-wa/i-na.

This may hint at the fact that cardinal numbers occupy a dedicated slot in the structure of the NP, possibly matching a Quantifier Phrase (QP) as observed for instance in Latin and Romance languages (cf. Giusti and Oniga 2006, among others); on the problem of the relative position with respect to specific types of modifiers, see §9. below.

Besides numerals, other quantifiers of Luwian include:

- (1) “all”-words: *punata/i-* (cuneiform only, matching the hieroglyphic logogram L430) and *tanima/i*;
- (2) “much/many”-words: *mia(n)ta/i-*, adverbial *man*;
- (3) “some”-words: represented by *wh*-indefinites, in particular *kwi-ha* but also the relative adjective *kwa/i-*, when used indefinitely.<sup>111</sup>

Semantically, Luwian “all”-words seem to work both for mass-quantification (“all”, referring to plural head nouns) and count-quantification (“every”, referring to singular head nouns). Bauer (2014, 65ff.) has highlighted this twofold function in respect of hieroglyphic Luwian *tanima/i-*.<sup>112</sup> However, the meaning “every” also seems to hold for hieroglyphic Luwian L430 (KIZILDAĞ 4, §3: *taskwira* L430 “to every land (dative/locative)”, even though a plural interpretation “to all the lands” cannot be excluded”);<sup>113</sup> all other occurrences in the corpus are ambiguous with respect to the category of number because the noun is written logographically or occurs as an instrumental case, which in Luwian is undifferentiated with respect to this category), which matches cuneiform *punata/i-*. The currently attested situation is as follows:

	<i>tanima/i</i> (cun. and hier.)	<i>punata/i-</i> (cun.)	L430
“every” + sg. N	Yes	unclear	unclear
“all” + pl. N	Yes	Yes	unclear

Table 10: Meaning of the Luwian “all”-words

<sup>111</sup> On the use of the indefinite *kwa/i-ha* with the semantics of a universal quantifier, in a fashion similar to the English “any”, cf. Sideltsev and Yakubovich 2016.

<sup>112</sup> Hawkins 2000, 435. Text: (TERRA)ta-sà-[kwa/i+ra/i] L430.

<sup>113</sup> Cf. also Bauer 2019 for the possible meaning “whole” in specific positions.

As for the position “all”-words occupy within the modified phrase, *tanima/i* seems to mostly occur prenominally (ca. 80% of the occurrences, excluding, of course, pronominal ones), in a regular unmarked position with respect to the head noun (which may or may not structurally coincide with that of numeral quantifiers); marked N Q positions are attested (ca. 20% of the occurrences), which can be explained in terms of informational prominence of the noun:

[18]

★ <i>a</i>	- <i>wa</i>	- <i>mu zanzi</i>	<i>massaninzi</i>	<i>taniminzi</i>
INTR	QUOT	I.D/L this.NOM.PL	god.NOM.PL	all.NOM.PL
<i>anni</i>	<i>arha</i>	<i>awinta</i>		
by	away	come.PST3PL		

“All these gods left (together) with me”<sup>114</sup>

Regardless of the position with respect to the demonstrative (on which see §9. below), in this case, the local fronting of the N (*massaninzi*) can be explained in terms of new-information prominence: the gods are mentioned for the first time in the text, while the entire DP/NP (*zanzi massaninzi taniminzi*) possibly occupies a low Top or a Foc position in the general clause architecture.

As for the cuneiform Luwian *punata/i-*, its non-pronominal occurrences are not numerous, but there are cases in which the position is certainly and consistently postnominal (KUB 35, 54 ii 31 with dupl. KBo 29, 2 ii 9).

“Much/many”-words are sparsely attested. *Mia(n)ta/i-* only occurs twice in the same sentence of the KARATEPE bilingual (Bauer 2014, 63). *Mana/i-*, on the other hand, occurs between five and ten times (in obscure hieroglyphic contexts, it is sometimes hard to tell the quantifier *mana* and the conditional subordinator *man* apart). Most of the occurrences are from the KARATEPE bilingual and possibly adverbial (Bauer 2014, 63f.); *pace* Bauer (cit.), the occurrences in AKSARAY §§2–3 and SULTANHAN §14 may either contain an adverbial use or a pronominal use. In any case, the syntactic behaviour of these elements as modifiers cannot be assessed because they do not occur within a

<sup>114</sup> KARKEMIŠ A1a §18; Hawkins 2000, 87ff. Text: *wa/i-mu-’ za-a-zi DEUS-ni-zi | ta-ni-mi-zi | CUM-ni ARHA PES-wa/i-ta.*

DP/NP.

“Some”-words, in Luwian, are represented by indefinites instantiating an existential reading in terms of quantification (in some cases with indefinite universal semantics). Their structural and positional behaviour is the one described above in §5. All in all, while numerals point to the existence of a left-located slot dedicated to quantification in the fine-grained structure of the Luwian DP/NP, the universal quantifier *tainima/i-* at least seems to exhibit the same degree of apparent freedom as other modifiers in terms of relative position: fronting of the noun is possible, while constraints obey the internal nesting of phrases.

## §8. Coordination of nominals

Luwian has two types of noun-coordinating strategies: null-conjunction and coordination headed by the enclitic connector *-ha*. Null-conjunction coordination, which is attested both for adjectives (see example [3c] above) and for nouns, simply involves the juxtaposition of nouns and NPs that form a hierarchically higher DP/NP. Long lists of coordinated DP/NPs often occur in the ritual texts from the cuneiform Luwian corpus. Most of them, however, appear in the postverbal or right-peripheral extra-clausal position, within highly marked constructions.

- [19]     *tain*        *-ti*        *-ada*        *malli*        *ayaru*  
oil.NOM.SG REFL    they.NOM    honey.NOM.SG    make.MP.IMP3PL  
*taparuwa*        *hiruta*                *tatariyamma*  
manipulation.N/A.PL   curse.N/A.PL        slander.N/A.PL  
“May they – manipulation, curse and slander – become honey and oil”<sup>115</sup>

A more straightforward example of null-conjunction coordination in unmarked clause-internal argumental position is offered by the hieroglyphic Luwian text BABYLON 1, §15:

- [20]     ★*apati*    *-pa -wa*    *Halpawannis*    *Tarhunzas*

<sup>115</sup> KUB 9, 6+ ii 12f.; Starke 1985, 111ff. Text: ta-a-i-in-ti-a-ta ma-al-li a-i-ya-ru ta-pa-a-ru-wa hi-i-ru-ú-ta ta-ta-ar-ri-ya-am-na.

he.D/L	<i>pa</i> QUOT	Halabean.NOM.SG	<i>T</i> .NOM	
<i>ara</i>		<i>pata</i>	<i>nis</i>	<i>piyai</i>
food.N/A.PL		drink.N/A.PL	not	give.PRS3SG

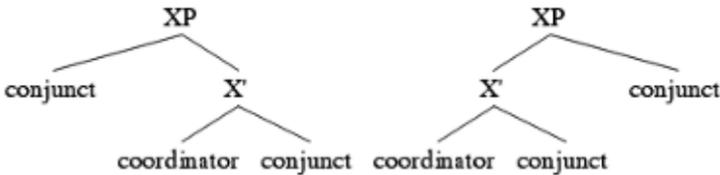
“To him may the Halabean Tarhunzas not give food and drink.”<sup>116</sup>

The other form of Luwian coordination involves the enclitic connector *-ha*. When coordinating phrases,<sup>117</sup> the position that *-ha* occupies is generally at the end of the coordinated chain, in a fashion virtually identical to the Latin *-que*.

[21]     *tipas*                      *taskwiras*                      *-ha*  
           sky.N/A.SG                earth.NOM.SG                *ha*  
           “The sky and the earth”<sup>118</sup>

Syntactically, it can be debated whether coordination, be it between phrases or whole clauses, should be seen as an exocentric or endocentric combination of signs (cf. in general the pioneering study by Sag et al. 1985; for more recent work, cf. Ning Zhang 2009, 1ff.).

When a coordinating conjunction – even a null one – is at work, the second option should be preferable, with the coordinating conjunction governing one of the conjuncts. In languages that feature one of the following structures:



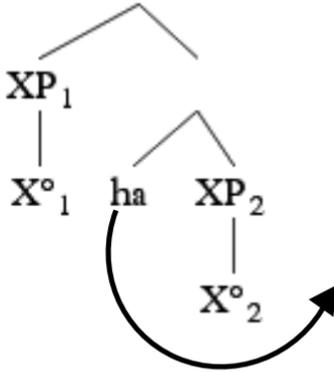
<sup>116</sup> Hawkins 2000, 392ff. Text: [pa]-ti-⟨pa⟩-wa/i-’ TONITRUS.HALPA.PA-wa/i-ni-sa (DEUS)TONITRUS-sa | ara/i-’ | pa-ta | NEG<sub>3</sub>-sa | pi-ia-i.

<sup>117</sup> On *-ha* as a possible sentence connector see Chapter 5.

<sup>118</sup> KÖRKÜN §9; Hawkins 2000, 173ff. Text: (“CAELUM”)ti-pa-sá | TERRA-sá-ha.

it has been observed that, cross-linguistically, asymmetry tests return positive feedback with respect to binding constraints, which makes the tree on the left the best structural candidate (with conjunct-conjunct-coordinator to be analyzed as a derived pattern).

Thus, the generalized pattern for *ha*-coordination in Luwian, *before prosodic inversion*, should be as follows:



with the order N(P) N(P)-*ha* easily derived from prosodic inversion (the enclitic *-ha* does not prosodically attach itself to the first coordinated phrase, but to the second one, inside the projection of the conjoined phrase it takes as a complement). That prosodic inversion is at work is confirmed by the case in which the second conjoined constituent is formed by more than one word: as predicted, the position of *-ha* usually breaks the phrase (KARATEPE I Ho., §73):

- [22]    *apa-sa*    *hantawatahi-sa*    *apan*    *-ha*    *hantawatin*  
           that.N/A.SG    kingdom.N/A.SG    that.ACC.SG    *ha*    king.ACC.SG  
           ‘‘That kingdom and that king’’.<sup>119</sup>

In Luwian, both null-conjunction and *-ha* can certainly coordinate nouns and adjectives. Beside nominals, it is worth briefly discussing the other parts of speech that can be coordinated by *-ha*. Adverbial coordination

<sup>119</sup> Hawkins 2000, 58ff. Text: á-pa-sá REX-ta-hi-sa | á-pa-há-’ | REX-ti-na.

in Anatolian is positively attested in Hittite with the connector *-(i)a* (e.g., Hoffner and Melchert 2008, 399ff. §§29–42). In the Luwian corpus, such a construction is uncommon, with a possible example in KARKEMIŠ A15b, §7, where the sequence (X)(-)á-lá/i | sà-na-ha may very well represent two coordinated adverbials: *ala sana-ha* (but the meaning proposed by I. Yakubovich in ACLT,<sup>120</sup> i.e., “right and properly”, is merely tentative).

Finally, while *-ha* could possibly have also worked as a clause connector (cf. Chapter 6 for discussion), it is impossible to identify any certain cases in which it locally conjoins verbal heads or verbal phrases. Dubious examples exist, e.g., the cuneiform Luwian KUB 35, 134 ii 3 (par. KUB 35, 133 ii 8), where *-ha* is clause medially attached to the finite verb *azzasda*, “you ate”; here, however, there is no preceding conjoined phrase, so the function of *-ha* may be that of a pure additive marker, with *azzasda-ha* better translated in English as “you also ate”.<sup>121</sup>

## §9. The hierarchic and informational structure of the Luwian DP/NP

The evidence presented so far indicates the following general conclusions:

1. Luwian is an article-less language, with determinerless inflected nouns acting as arguments both in the singular and in the plural.
2. As a consequence, there are no overt syntactic “determiners” (lexical heads of a DP), while the demonstrative elements are merely deictic or anaphoric modifiers.
3. Both relational and non-relational attributive modifiers tend to occur prenominaly, while postnominal modification (as a result of the leftward movement of the head noun) is allowed for the purposes of marking the informational prominence of the noun:
  - a. There seems to exist an active left periphery within the

<sup>120</sup> Data retrieved in January 2018.

<sup>121</sup> Starke 1985, 283. Since the following clause also contains a dubious verb followed by *-ha*, it cannot be excluded that the repetition of the additive marker introduces here a “both ... and” construction, which is allowed by the Luwian grammar.

boundaries of the phrase, which can be occupied by fronted modifiers, requiring functional projections to be included in the syntagmatic representations.

4. Some classes of modifiers (demonstratives, numerals) have a much stronger tendency to occur in the left area of the phrase.
5. A few specific modifiers require a postnominal collocation.
6. Changes in the orientation of some specific modifiers from the varieties documented in the Bronze Age cuneiform documents are sporadically attested and apparently unsystematic.

From the perspective of a generalized phrasal structure, theories have been formulated that propose a stratified structure of the DP/NP, including a left peripheral area dedicated to functional and informational features, analogically to the left periphery of the clause. From this perspective, a general phrase-architecture of the Luwian DP/NP would require the possibility of comparing the patterns of all possible elements that may co-occur. Partial structural representations, however, are possible. After all movements and transformations, in the linear or phonetic form, the structure of a phrase containing a nominal head and an attributive modifier (be it a single attribute or an adjectival phrase), seems to present the following pattern:

[23]      [ADJP        ]            [N(P)        ]  
              [ADJP *muwattallin*]   [N(P) *warpin*]

Furthermore, a hierarchy of modifiers can be observed, with relational modifiers usually preceding non-relational ones. This may lead to a representation with more than one position hosting adjectives; alternatively, the relational modifiers may simply occur higher in the hierarchy because they have scope over both the non-relational one(s) and the modified noun, with the prenominal slot being recursively iterable. no position will be taken with respect to this theoretical issue; rather, a linear representation of the precedence will be indicated:

[24]      [AdjP-rel *Kamanis*]   [AdjP-nonrel *hantilis*]   [N(P) *hudarlis*]  
              K.of.NOM.SG           prominent.NOM.SG   servant.NOM.SG  
              “The prominent servant of Kamanis”<sup>122</sup>

<sup>122</sup> CEKKE §6; Hawkins 2000, 145ff. Text: <sup>1</sup>ka-ma-ni-sa FRONS.LAII/U-

The position of the different relational modifiers, be they genitives, possessive adjectives or genitival ones is impossible to subcategorize. Recursive relational modification is also possible, as demonstrated in KARKEMIŠ A16a §1, while the hierarchy is again dictated by the semantic scope:

- [25]     [[<sub>ADJP</sub> *Karkamisizzas*]   [[<sub>ADJP</sub> REGIO-*niya(s)si*] [<sub>N(P)</sub> *nanis*]]]  
           *K.of.NOM.SG*                   *land/country.G.SG*           *lord.NOM.SG*  
           “Country-lord of Karkemiš”<sup>123</sup>

The lower *-si* genitive REGIO-*niyassi* “of the country” only modifies the noun, while the entire phrase REGIO-*niyassi nanis* (as “lord of the Country” was a specific royal title, it is impossible to exclude that at a given point it was perceived as a compound) is the element modified by *Karkamisizzas* “of Karkemiš”. Of course, adjectives need not be nested; they can also be coordinated and constitute a single adjectival phrase (cf. examples [5–6] above).

Once the structure of the core of the modified NP has been sketched, one can turn to marked constructions, recalling that a postnominal position is attested for both relational and non-relational modifiers. As these constructions have been analysed as marking the informational prominence of the head-noun over the modifiers, a left-bound syntactic movement of the noun needs to be postulated. For the noun to be moved before the adjectival phrase-slots, a left-peripheral functional area was hypothesized. An example is [26]:

- [26]     *tanati hapazurawati*  
           *soul.A/1 obedient.A/1*  
           “Because of the obedient soul”<sup>124</sup>

This is the pattern of informationally marked phrases with the head-

sa SERVUS-la/i.

<sup>123</sup> Hawkins 2000, 190f. Text: kar-ka-mi-s]i-za-sa(URBS) | REGIO-ni-ia-si DOMINUS; several parallels in analogous contexts throughout the hieroglyphic corpus.

<sup>124</sup> KÖRKÜN, §3; Hawkins 2000, 172ff. Text: “COR”-na-ti (“COR”)ha-pa-zú+ra/i-wa/i-ti.

noun moved to the left of the modifier, that is, to a functionally active left periphery, which is similar to the one located in the left periphery of the clause. Cases of sequence AdJP NP AdJP are not attested in the corpus, unless the first modifier is a possessive, a numeral or a demonstrative.

Still, as previously stated, some classes of modifiers can occur before the position of fronted nouns. The example from the KÖRKÜN stela is not complete. A possessive modifier *ama/i-* “my” also occurs, inflected in the instrumental, which has semantic scope over the entire modified NP:

- [27] [PossP *amiti*] [... *tanati hapanzurawati*]  
 “Because of my obedient soul”

Since the fronting of the noun in this example does not cross the slot (here conventionally labelled PossP) dedicated to the possessive, either PossP should be analysed as being located outside of the left-peripheral margin of the phrase, or belonging to an iteration of an informational slot. In order to rule out one or other interpretation, it is necessary to consider the other examples attested in the corpus. As we have seen, postnominal possessive adjectives can exist, which means that the movement of the noun is possible; in [27], however, this does not take place. The problem can be solved by recursively repeating the structure of the core modified NP, with a left-peripheral functional area that can be activated in all nested instances of the phrase.

Of course, when no lower modification occurs, the simple noun is the element modified by the possessive adjective, with no overt iteration involved, as in [28] (marked structured, as opposed to unmarked [29]):

- |      |   |                             |
|------|---|-----------------------------|
| [28] | <i>tatis</i><br>father.NOM.SG<br>“my father” <sup>125</sup> | <i>amis</i><br>my.NOM.SGM   |
| [29] | <i>amis</i><br>my.NOM.SG<br>“my lord” <sup>126</sup>        | <i>nanis</i><br>lord.NOM.SG |

<sup>125</sup> JISR-EL-HADID 1 §2; Hawkins 2000, 379f. Text: tá-ti-sa a-mi-sa.

<sup>126</sup> KARKEMIŠ A18e §6; Hawkins 2000, 195. Text: á-mi-sa DOMINUS-ni-sa.

A similar scheme also applies to the instances of modified NPs, which include a demonstrative or a numeral quantifier, which, as it has been argued, seem to be more decisively left-aligned (structurally higher than other modifiers when other modifiers are present).

- [30] [QP 3 [... *ussissin* *hawin*]]  
 3 annual.ACC.SG sheep.ACC.SG  
 “3 annual sheep (offerings)” (= annual sacrifice)<sup>127</sup>
- [31a] [DemP *zas* ... [... *Karkamisizzas* *Tarhunzas*]]  
 this.NOM.SG *K.of.NOM.SG* *T.NOM.SG*  
 “This Tarhunzas of Karkemis”<sup>128</sup>
- [31b] [DemP *zan* ... [... *Tarhunzan* *muwattallin*]]  
 this.ACC.SG *T.ACC.SG* *mighty.ACC.SG*  
 “This mighty Tarhunzas”<sup>129</sup>

Reconstructing a dedicated node for the different classes of modifiers is an appropriate next step to be undertaken: while it has been correctly argued (Giusfredi 2017b) that possessives and demonstratives do not differ from other modifiers, their relative freedom of configuration obeys the constraints of the structure outlined here. Cross-linguistic evidence dating back to Greenberg (1963, Universal no. 20) and revisited by Rijkhoff (1998) and Cinque (2005) points to prevalent hierarchic patterns within the modified NP:

1. Dem Num Adj N: highly prevalent pattern, very widespread, e.g., in the Germanic languages.
2. N Adj Num Dem: highly prevalent pattern, very widespread, e.g., in the Eskimo-Aleut and in the Austronesian languages.
3. Dem Num N Adj: prevalent pattern, typical of Romance languages.
4. Dem N Adj Num: prevalent pattern, attested, e.g., in some

<sup>127</sup> MARAŞ 11 §8; Hawkins 2000, 271. Text: 3 “ANNUS”-si-si-na  
 OVIS(ANIMAL)-wa/i-na.

<sup>128</sup> KARKEMIŞ A2+3 §3; Hawkins 2000, 109ff. Text: 3 “ANNUS”-si-si-na  
 OVIS(ANIMAL)-wa/i-na.

<sup>129</sup> ARSUZ 1/2 §19; Dinçol et al. 2015. Text: (DEUS)[TONITRUS]  
 [(FO[RTIS]-wa/i-<ta>-li-na)].

Sino-Tibetan languages, in some Caucasian languages and in a few isolated others.

The other 20 possible combinations of the four classes of elements are much less common or, in some cases, unknown or non-existent.

The problem, when trying to expand this model (and its syntactic structural transposition; see, for instance, Cinque 2005) to the Luwian language, is that the available corpus does not currently offer combinations containing both a numeral and a demonstrative. This means that a generalization of the phrasal hierarchy can only remain speculative. However, since it was possible to establish the two partial orders:

- a. Dem Adj N (with N-movement variant Dem N Adj)
- b. Num Adj N (with N-movement variant Num N Adj)

and since the order Num Dem Adj N is cross-linguistically unattested, while pattern 1 of the previous list (Dem Num Adj N) is quite typical of Indo-European, if dedicated slots existed for the specific classes of modifiers, then Luwian is likely to have followed pattern 1 as well. Pattern 1 is also a good candidate also for the hierarchic pattern of Hittite (where both numerals and demonstratives precede the head more strictly than other modifiers) along with, possibly, of Proto-Anatolian. The fact that the non-numerical quantifier *tanima/i-* occurs at least once *after* the demonstrative *za-* (see example [18] above), is a further element that supports this reconstruction.<sup>130</sup>

According to the data available in the attested corpus (and with the positions of Dem and Num *only tentatively* assigned to an ordered phrasal slot), a cartographic modelling of the DP/NP in Luwian can therefore be represented, at best, by the following (I only label the main

<sup>130</sup> A Hittite example seems to confirm this pattern, too: KBo 4.8 ii 12f. (I thank H.C. Melchert, *pers. comm.*, for making me aware of this construction):

<i>kas</i>	<i>-pat</i>	<i>1-as</i>	<i>dammeshas</i>
this.NOM.SG	indeed	1.NOM.SG	punishment.NOM.SG
“...this one punishment”			

Text: ka-a-aš-pát 1-as dam-me-eš-ha-aš.

positions, without indicating the ones that host fronted material):

[32] [DP' [DemP [QP [PossP [AdjP [NP]]]]]]]

The head of the putative DP is empty in all realizations, if one assumes that Luvian is, in fact, a DP language.



## Chapter 3 - The Luwian Pronouns

### §1. The pronominal system

The Luwian pronominal system includes a few different types of words that come under the label “pronoun” in the jargon of traditional grammar. More precisely, Luwian has a set of personal pronouns, a system of demonstrative pronouns, *wh*-derived relative pronouns, which also work as indefinite and interrogatives, and a group of orthotonic possessive adjectives, which may also be used as pronouns.

The pronominal system can thus be represented as crossing the different semantic types and the prosodic status of orthotonic versus clitic, as in the following table:

<b>Prosody</b>	Orthotonic	Clitic
<b>Function</b>		
Personal	Yes	Yes
Demonstrative	Yes	No <sup>131</sup>
Relative	Yes	No
Possessive (mostly adjectival)	Yes	No

Table 11: Positional patterns of Luwian pronouns

<sup>131</sup> However, as regards the connection of the *-za/-sa* particle usually attached to singular nominatives-accusative neutra with deictic *za-*, first discussed by Melchert (*apud* Arbeitman 1992), see the recent contribution by Jasanoff 2010, with reference to the previous literature. On similar evidence for Palaic see Melchert 1984, 28ff.

The structure of the pronominal system has been outlined in Chapter 1. Here, I will simply recall its main features:

1. The system of personal pronouns covers all the persons and numbers for the orthotonic series and for the clitic series. They are inflected for case, that is, nominative, accusative, genitive, dative and ablative/instrumental, with the addition of a so-called dative-reflexive form, which is slightly different from the dative proper and can be used for reflexive-like predications, as well as also to mark a beneficiary or the subject of a copular predication as opposed to the predicate noun (cf. §2.4. and Chapter 4, §4. below). Etymologically, both the non-reflexive and the reflexive pronouns go back to similar roots, but some forms of paradigmatic pressure apparently intervened in producing a rather complex paradigm (cf. Yakubovich 2010, 161ff.).
2. The system of demonstratives in Luwian is synchronically limited to proximal and distal forms, *za-* and *apa-* respectively, which are also inflected in the same way as any other nominal and can be used pronominally or adjectivally. When used pronominally, they replace a DP/NP; when used adjectivally, they modify it.
3. The relative pronoun of Luwian, *kwa/i-*, is a *wh*-element that works both pronominally and adjectivally; furthermore, several subordinators of the language can be traced back to fossilized inflected forms of *kwa/i-*, which will turn out to be very relevant for the analysis of the interphrasal subordination in Chapter 6.
4. Possessive pronouns are in fact adjectives, while their pronominal use is secondary and highly underrepresented in the corpus. In Luwian, they are orthotonic, while, in Hittite, a clitic series exists.

In the following sections, I will examine the three classes of pronouns, given that the behaviour of possessive modifiers, being mostly adjectival, has been already discussed in Chapter 2.

## §2. The personal pronouns

The syntactic behaviour of orthotonic and clitic personal pronouns is different, both from the perspective of their distribution and position and from the perspective of their functions. Therefore, the two classes will require separate discussions.

## §2.1. Orthotonic pronouns

When used as an independent pronoun, the Luwian orthotonic personal pro-form simply replaces a nominal DP/NP and is distributed accordingly. It is also true that most of the occurrences of independent personal pronouns seem to feature some kind of informational markedness, which in traditional terms could be described as “emphasis”, while, resorting to the jargon of information-structure, could be labelled as a form of focus. This is due to two different peculiarities of the Luwian pronoun system on a functional level. First of all, Luwian is a pro-drop language, which means that the subject DP/NPs can be syntactically omitted without the sentence becoming ungrammatical (Anatolian thus patterns with Italian and Arabic, and against English and French). Therefore, orthotonic nominative pronouns are usually expendable, and when they are used they involve an emphatic (over)marking of the first semantic actant of the predication. Secondly, Luwian could simply employ a clitic pronoun for discourse-driven referential anaphora; when an orthotonic pronoun was used instead, either a pragmatic deictic function or an emphatic *nuance* was triggered.

Functional interpretations, however, need to be justified on the structural level by assessing the different patterns in which emphatic orthotonic personal pronouns could occur.

In a few instances, personal pronouns can be clearly fronted:

- [1]        *ti*            *-ha*        *-wa*    *-anza*        *tuwin*  
           you.NOM    *ha*        QUOT    we.D/L        your.ACC.SG  
           *niwarannin*        *anni*        *L77-tis*  
           son.ACC.SG        for        pledge.PRS2SG  
           “You will also pledge to us a child of yours”<sup>132</sup>

Here, the orthotonic personal pronoun “you” occupies a position in the left periphery that, in all likelihood, encodes additive focus, as indicated by the presence of the additive marker *-ha*.

The position of the orthotonic pronoun in [1] is lineary similar to that

<sup>132</sup> ASSUR Letter E, §30; Hawkins 2000, 536ff. Text: *ti-ha-wa/i-za | tu-wa/i-na | INFANS-ni-na CUM-ni L77-ti-sa*.

occupied by the personal pronoun *amu* “I” in all the copular clauses with the form “I am PN”; however, in the *amu*-clauses no additive focus can be involved, as they usually occur discourse-initially. The non-focused first-position occurrences in the *amu*-clauses make up two thirds of all the attested instances of an orthotonic personal pronoun in the corpora of hieroglyphic and cuneiform Luwian combined (ca. 130 out of less than 200).

In other cases (no more than 60 in the combined corpora), the position occupied by the personal pronoun is apparently clause-medial:

- [2]        *za*            *-wa*        *istrattan-za*    *za*            *-ha* MENSA-*za*  
 this.N/A.SG QUOT   throne.N/A.SG   this.N/A.SG    *ha* table.N/A.SG  
 (*a*)*mu*    *Panamuwa(t)tis*   *Suppiluliumis tar(ra)<sup>2</sup>wan(n)<sup>3</sup>is*  
 I.NOM    *P*.NOM            *S*.of.NOM.SG    *t*.(of.)NOM.SG  
*wanattis*            *tuwahha*  
 woman.NOM.SG    put.PST1SG  
 “This throne and this table I, Panamuwa(t)tis, wife of  
 Suppiluliumis the *t*. (or: *t*. wife of *S*.), have put”<sup>133</sup>

Informationally, however, it is clear that while the topicalized DP/NP is the phrase “this throne and this table”, the position of *amu* (*mu* by aphaeresis or more likely by defective writing) is still a marked and highly emphatic one; very likely, it occupied a focus position, lower than the topicalized constituent, rather than an unmarked one. In a more analytical theory of focus, such as the one proposed by Goedegebuure (2014, in particular Chapter 6–9), it is clear that here no previous context exists from which the focus-function may select an option; the most appropriate label one may employ for this kind of informational prominence is probably “identification focus”, defined as a semantic “operator defining exhausting identification” (É. Kiss 1998, 271).

In general, given the emphasis that the very use of an orthotonic personal pronoun rather than a clitic (or dropped) pronoun always implies in Luwian, it is reasonable to assume that the vast majority of the constructions containing such forms have them located in a

<sup>133</sup> BOYBEYPINARI 1, §1; Hawkins 2000, 336ff. Text: [z]a-wa/i (THRONUS)i-sà-tara/i-tá-za za-ha MENSA-za mu <sup>1</sup>pa-na-mu-wa/i-ti-sa PURUS.FONS.MI-sa IUDEX-ni-sa FEMINA-na-ti-sa PONERE-wa/i-ha.

peripheral functional (either topical or focal) position. Whether different types of foci involving pronouns belong to different specific positions in the clause architecture is, however, unclear; it is worth noting that a directly preverbal focus position like the one successfully identified by Goedegebuure (e.g. 2014) is not clearly attested in Luwian: I will therefore refrain from discussing its implications for phrase-structure based syntax models.

### §2.2. Clitic pronominal arguments and cliticization constraints

Clitic personal pronouns always occur prosodically attached to the first accented word of the clause, be it a whole phrase or a part thereof. They are generally anaphorically referred to nominals, which have been mentioned previously discourse-wise. They are both phonological and syntactic clitics; their left-peripheral location depends on strong functional features, which belong in the left-periphery, while their exact position in the phonetic form of the clause is probably the result of inversion.

Cliticization rules obey structural constraints. In fact, according to a well-known discovery from the 1990s (Garrett 1990; 1996), the distinction between unaccusative and unergative verbs is matched, in Hittite, by the pattern of cliticization described by the so-called Garrett's Rule: *clitic personal pronouns never occur as subjects of transitive and unergative verbs, but seem to be obligatory as subjects of unaccusative ones* – unless, of course the unaccusative subject is orthotonic. This can be summarized by the following table, which predicts the syntactic behaviour in the case of dropping of the subject:

Subject	Object	Predicate	grammatical
Orthotonic	(orthotonic)	transitive/ unergative	yes
Orthotonic	(clitic)	transitive/ unergative	yes
Clitic	(orthotonic)	transitive/ unergative	no
Clitic	(clitic)	transitive/ unergative	no

Orthotonic		unaccusative	yes
Clitic		unaccusative	yes

Table 12: Constraints to the cliticization of arguments

The cliticization of Luwian arguments and of Luwian DP/NPs in general is informationally determined: anaphoric elements are cliticized and undergo leftbound movement. In Chapter 5, it will be argued that the position of the clitic elements – including pronouns – is prosodically determined by means of prosodic inversion from a very high projection, which is certainly peripheral. In light of the structure of the verbal phrase, Garrett’s syntactic interpretation of the split-intransitivity rule as a locality constraint (1990, 145–150) can be fully subsumed. To illustrate Garrett’s split-transitivity rule and his syntactic interpretation, one should first consider the following Hittite examples:

- [3a] *Armas aki*  
moon.NOM die.PRS3SG  
“The moon eclipses.”<sup>134</sup>
- [3b] *n -at ... akir*  
INTR they.NOM die.PST3PL  
“They ... died.”<sup>135</sup>
- [3c] *Muwattallis Huzziyan kuenta*  
M.NOM H.ACC kill.PST3SG  
“Muwatallis killed Huzziya”<sup>136</sup>
- [3d] *man -us -kan Huzziyas kuenta*  
PTCL they.ACC PTCL H.NOM kill.PST3SG  
“Huzziya would have killed them...”<sup>137</sup>
- [3e] *\*n -as Huzzian kuenta*  
INTR he.NOM H.ACC kill.PST3SG  
“He killed Huzziya.” (unattested and ungrammatical)

For [3a] to become [3b] and for [3c] to become [3d] (a transformation

<sup>134</sup> KBo 8, 1 iii 8. Text: <sup>D</sup>SIN-aš a-ki.

<sup>135</sup> KUB 26, 69 vi 13. Text: na-at ... a-ki-ir.

<sup>136</sup> KBo 16, 25 iv 15. Text: <sup>M</sup>Mu]-wa-tal-li-iš <sup>M</sup>Hu-uz-zi-ya-an ku-en-ta.

<sup>137</sup> KBo 3, 1+ ii 11. Text: ma-a-nu-uš-kán <sup>M</sup>Hu-uz-zi-ya-aš ku-en-ta.

motivated by the informational structure of the discourse) an argument must be moved to a left-peripheral position from inside the verbal phrase. This is grammatical for both unaccusative subjects and transitive objects, which are generated in a position of complement inside the VP. It is also grammatical for other indirect complements in the dative. But it is ungrammatical for the transitive subject, which is base-generated as an external argument, in a structural position that, regardless of the theoretical problem concerning its precise definition, blocks cliticization.

This constraint also exists in Luwian (Melchert 2011), while there is no proof that any other Anatolian language exhibited a different pattern of cliticization. The following examples show the proper cliticization of the transitive object and the unaccusative subject in the hieroglyphic Luwian corpus:

- [4a]     ★*a*        *-wa*        *-mu*   *zas*            CAELUM *Tarhunzas*  
           INTR     QUOT        I.ACC this.NOM.SG celestial *T*.NOM  
           *taniminzi*            *-ha*        *massaninzi*        *azanta*  
           all.NOM.PL         *ha*        god.NOM.PL        love.PST3SG  
           “And this celestial Tarhunzas and all the gods loved me.”<sup>138</sup>
- [4b]     (*a*)        *-wa*        *-as*        *tanimari sanawasatarari awida*  
           INTR     QUOT        he.NOM all.A/I        goodness.A/I    come.PST3SG  
           “He came with/in all goodness”<sup>139</sup>

Thus, with Garrett (1990, 143ff.), it is perfectly safe to consider this phenomenon to be typical of Proto-Anatolian or of a common forefather of the Anatolian group.<sup>140</sup>

<sup>138</sup> BOROWSKI 3 §2; Hawkins 2000, 230f. Text: [za-zi]-pa-wa/i-mu DEUS-ni-zi | (MANUS)su-hi-tà | (LITUUS)á-za-ta.

<sup>139</sup> SULTANHAN §5; Hawkins 2000, 464ff. Text: wa/i-sá | OMNIS.MI-ri+i [| sa]-na-wa/i-sa-tara/i-ri+i | á-wa/i-tà-’

<sup>140</sup> For further on the structural collocation of arguments in the the VP and IP layers, cf. Chapter 4. On the local configuration of clitics (including non-pronominal ones) and on clause-architecture related phenomena of reduplication and doubling, as well as for the position of clitics with respect to the entire clause, see Chapter 5, §3.

### §2.3. Clitic pronouns and “external possession”

A very specific use of the clitic personal pronouns in Luwian, Anatolian and also in other related and unrelated languages is represented by the so-called “external possession”. It features a raising of a covert possessor to a high hierarchic position in the periphery of the clause. The phenomenon is not limited to Ancient Anatolian, nor is it particularly unusual in Indo-European. Very typical constructions are attested in languages like French:

- [5a] Je prends *sa* main  
 [5b] Je *lui* prends la main

Structurally, it has been interpreted in terms of extraction of the possessive and replacement by a V-selected nominal – be it clitic or orthotonic (Deal 2013). Semantically, the construction is problematically close to that of the dative of a beneficiary, while the noun or pronoun cross-linguistically takes the same case as the possessee (e.g., in Japanese) or the case of an indirect object (in Indo-European languages that inflect, this is usually marked as a dative or dative-reflexive). In cases of the co-reference of the subject and possessor/beneficiary, the pattern may overlap with transitive-reflexive morphosyntax, as in German [6a] (with [6b] representing either the dative of a beneficiary or the case of a raised possessor; cf. also Bauer 2014, 138f.):

- [6a] *Ich* breche *mir* den Hals  
 [6b] Er bricht mir den Hals

In Luwian, “external possession” has been described as marked by a dative clitic pronoun, as shown by the examples provided by Bauer (2014, 139ff.):

- [7]        *★a*        *-wa -tu*    *alaman-za*    *ARHA marnuwantu*  
 INTR        QUOT he.D/L    name.N/A.SG    away    destroy.IMP3PL  
 “May they destroy his name”<sup>141</sup>

<sup>141</sup> ALEPPO 2 §22; Hawkins 2000, 236. Text: *wa/i-tú-’ | á-lá/i-ma-za | ARHA | “DELERE”-tú.*

There are no clear instances in which the dative-reflexive form of the pronoun (cf. §2.4. below) encodes an apparent raised possessor; on the contrary, the occurrence in MARAŞ 4 features both a non-raised possessive adjective and a dative-reflexive pronoun, which encodes mediality:

- [8] (a) *-wa -mi amin atrin appari*  
 INTR QUOT REFL my.ACC.SG image.ACC.SG afterwards  
*walliyamuwahha*  
 make.good.PST1SG  
 “Afterwards I exalted my soul”<sup>142</sup>

Bauer (2014, 139ff.), also considers cases of orthotonic fronted indirect object DP/NPs to be categorized as forms of external possession:

- [9] *Sipiya -wa -tta Niyassan Harranawannis*  
 S.D/L QUOT PTCL N.of.D/L H.of.NOM.SG  
*Kupapaya kumapi tawa zanta azantu*  
 K.D/L together eyesACC.PL down eat.IMP3PL  
 “To Sipis son of Nis may the Harranean (god) together with  
 Kubaba swallow down the eyes”<sup>143</sup>

In terms of phrase structure, the construction in [9] features a topicalized non-argumental dative DP/NP selected by the verb and then raised, encoding the maleficiary of the action.

Since dative-marking of possessors and beneficiaries/maleficiaries are common strategies in Anatolian and Luwian, one may very well wonder whether extraction by possessor-raising as a syntactic strategy should be assumed at all. Even when clitics are involved, as proven by the occurrence in KARKEMIŞ A31+, possession can be overmarked by an orthotonic possessive adjective:

<sup>142</sup> MARAŞ 4, §15; Hawkins 2000, 257ff. Text:| wa/i-mi-i | á-mi-na (“COR”)á-tara/i-i-na | á-pa-ara/i | BONUS-li-ia-nu-wa/i-ha.

<sup>143</sup> KARABURUN §8; Hawkins 2000, 481ff. Text: si-pi-ia-pa-wa/i-ta ni-ia-sá-na hara/i-na-wa/i-ni-sa(URBS) (DEUS)ku+AVIS-ia ku-ma-pi ta-wa/i INFRA-ta á-za-tu. Cf. parallel sentence ibid. §10.

- [10] (a) *wa -mu amanza STATUA parran tanu(wa)hha*  
 INTR QUOT I.D/L my.N/A.SG statue before put.PST1SG  
 “I set up my statue (for myself?) in front (*scil.* ‘of the temple of Kubaba’)”<sup>144</sup>

While one may argue that, in this case, the clitic pronoun *-mu* and the possessive adjective *aminzi* encode two different functions (the beneficiary assigned by V and the possessor assigned by the possessed N respectively), it is absolutely legitimate to doubt that the structural position of *-mu* in [10] is any different from the position of *-tu* in [7]. In order to establish to what extent Luwian featured external possession, cross-linguistic comparison is in order. At the semantic level, external possession is cross-linguistically associated with “inalienable” possession (e.g., body parts or intrinsic features of the possessor).<sup>145</sup> While Yakubovich (2006) proposed that external possessors in Luwian only encode inalienable possession structures, Bauer produced a counterexample, in which non-inalienable possession would be marked:

- [11] ★*a -wa -tu -tta turpin sarlattan-za -ha*  
 INTR QUOT he.D/L PTCL bread.ACC.SG libation.ACC.PL *ha*  
*nis arha lanti*  
 not away take.PRS3SG  
 “Let them not receive (lit. take away) the bread and libation from him”<sup>146</sup>

A similar construction occurs in the same text, KARKEMIŠ A11a, at §12. Once again, it is evidently doubtful as to whether the relationship

<sup>144</sup> Hawkins 2000, 141ff. Text: *wa/i-mu | á-ma-za STATUA PRAE-na CRUS-nu-ha*.

<sup>145</sup> For a more detailed discussion of the roles, functions and structural position of putative dative raised possessors as well as for a more fine-grained taxonomy of the different types of external marking of possession see Deal 2013. The languages in which non-inalienable possession can be marked by external raised possessors are, however, in a debatable minority.

<sup>146</sup> KARKEMIŠ A11a, §27; Hawkins 2000, 96ff. Text: *turapin wa/i-tú-ta-’ (PANIS)tú+ra/i-pi-na (LIBARE)sa<sub>5</sub>+ra/i-la||-ta-za-ha NEG<sub>3</sub>-sa ARHA | CAPERE-ti-i*.

between the god and the offers he receives is in fact that of a possessor, and not simply that of a beneficiary. Even if it were, debating about whether the relationship encoded by this putative possession is alienable or inalienable would require an insight into a religious conception of divinity and sacrifice, on which the modern scholar can, at best, speculate.

In general, the safest conclusion is the following: Luwian features cases of the apparent raising of the external possessor for inalienable possession, but the boundaries between them and simple dative pronouns selected by the verb and the encoding of the beneficiary/maleficiary of a predication are very blurry. For alienable possession, the sparsely attested cases involving a dative pronoun or DP/NP admit to a beneficiary/maleficiary analysis and need not be categorized as external possessor constructions.

#### §2.4. The so-called dative-reflexive clitic pronouns

The label dative-reflexive pronoun series of Luwian is traditionally applied to a class of elements with a complex set of functions. This terminology depends on two different facts. Firstly, before levelling occurs, the etymology of forms like the third-person *-ti* and the first-person *mi* seem to refer back to a dative/locative ending. Besides etymology, however, a second reason seems to be functional in nature: dative and “dative-reflexive” pronouns are interchangeable to a limited extent, and can both occur in reflexive-like clauses.

From the perspective of structural syntax, the different uses of the “dative-reflexive” pronoun (and of the dative pronoun, which can replace it in some cases) need to be categorized depending on syntactic criteria. In general, the uses of the “dative-reflexive” are:

1. first and second person subject-marker in copular “to be”-clauses, with and without overt copula;
2. possibly a telic marker in copular “become”-clauses, with the medio-passive forms of verbs *iziya-* and *aya-*, “do, make”;
3. reflexive-marker in bi-argumental constructions, aligned and co-indexed with the subject, subcategorized as follows:
  - a. physical actions expressed by grooming verbs (e.g., *ilhai-*, *ililhai-* “wash”);
  - b. experiencer predications by verbs such as *kwis(s)a-*, “to fear”.

It is not possible to determine whether the construction under point 1) is to be seen as dependent on the need to mark the dropped subject in a pro-drop language (as proposed by Yakubovich 2010, 166f.), as several pro-drop languages do not produce an overt category to replace a dropped participant to the predication. If they did functionally replace a subject it would be reasonable to assume that they were co-indexed with the raised subject of the copula; note, however, that, in the case 1) they always occur in clauses in which both the subject and the predicate noun are overtly expressed (the copular verbs of Anatolian seem to align with unaccusatives with respect to cliticization rules):

[12]     *amu*     *-mi*     *Urhilina*  
           I.NOM   REFL     *U.*  
           ‘‘I am Urhilina’’<sup>147</sup>

Also in case 2), where the pronoun may have the function of a telic marker, the fully prevalent pattern also requires the presence of an overt subject, which makes the two structures linearly similar to each other:

[13]     *mallit*   *-ti*     *-ada*   *ayaru*  
           honey   REFL     they.NOM   become.IMP3SG  
           ‘‘May they become honey’’<sup>148</sup>

Thus, judging from the corpus, there is no compelling reason to think that the ‘‘dative-reflexive’’ pronoun ever *replaced* a subject; as a consequence, I will not assume that it occupied a clitic subject position in the clause architecture. More likely, in spite of its morphological agreement with the subject, it patterns with the modifiers of the semantics of the verb.

The cases under point 3)a-b, on the other hand, may be expected to be different. However, since there are no attested cases of the perfect identity of subject and object (as in ‘‘I kill myself’’), a proper reflexive scheme encoded by a bi-argumental scheme with the reflexive argument

<sup>147</sup> RESTAN §1; Hawkins 2000, 409. Text: EGO-mi u+ra/i-hi-li-na. Ca. 90+ occurrences in the corpus versus one in which the subject pronoun is dropped (cf. Yakubovich 2010, 167, for this example).

<sup>148</sup> KUB 9, 6+ ii 16; Starke 1985, 111ff. Text: ma-al-li-ti-a-ta [a-]i-ya-ru

being a constituent is not present in the corpus (for limited evidence of the object *-za* in Hittite, cf. Hoffner and Melchert 2008, 358 §28.20; for similar – and similarly rare – semantics expressed by the medio-passive of transitive verbs, cf. Hoffner and Melchert 2008, 303, §21.6). Both with grooming verbs ([14a-b]) and with experiencing predicates ([14c]), subject DP/NPs can be present and occupy the subject position (or be moved from there to a higher informational projection), while the object DP/NP is not identical to the subject and occupies the object position (or a higher informational position, if it is fronted):

- [14a] *assa*                    *-ti*        *ilhadu*                    *tappasantis*  
 mouth.N/A.SG        REFL.3SG wash.IMP3SG        heaven.*anti*.NOM.SG  
 “May the Heaven wash his mouth”<sup>149</sup>
- [14b] *assa*                    *-mmas*    *ililhandu*  
 mouth.N/A.SG        REFL.3PL wash.IMP3PL  
 “May they wash their mouth(s)”<sup>150</sup>
- [14c] (a)                    *-wa*        *-ti*        *kwis*                    *zan*  
 INTR        QUOT        REFL.3SG who.NOM.SG this.ACC.SG  
*massanin*                    *kwi(s)sai*  
 god.ACC.SG                    fear.PRS3SG  
 “Who(ever) will fear this god...”<sup>151</sup>

Structurally, the function and position of the dative-reflexive clitic pronoun does not significantly differ from that of a dative pronoun, when encoding the role of beneficiary or maleficiary; with the difference being that the presence of such a dative DP/NP is usually optional, while the presence of either a “dative-reflexive” form or a dative form replacing it as in [14b] is a *semantically* compulsory part of the self-directed predication. Without *-ti*, example [14a] simply means “may the Heaven wash the mouth”. In [14c], on the other hand, it is impossible to judge whether the absence of the pronoun *-ti* would alter the semantics or simply make the sentence ungrammatical: both occurrences of the

<sup>149</sup> KUB 9, 6+ ii 14; Starke 1985, 111ff. Text: a-a-aš-ša-ti e-el-ha-a-du tap-pa-ša-an-ti-iš.

<sup>150</sup> KUB 9, 6+ ii 26; Starke 1985, 111ff. Text: a-a-aš-ša-am-ma-aš e-li-el-ha-a-an-du

<sup>151</sup> SULTANHAN §17; Hawkins 2000, 466ff. Text: | wa/i-ti-i | kwa/i-sa | za-na | DEUS-ni-na | kwa/i-sà-i.

verb *kwissa-* contain the reflexive pronoun, which may indicate that its presence was compulsory in this case as well.

### §3. Demonstrative pronouns

The functions of the demonstrative pronouns are generally deictic, with the Luwian ones seeming to share the structural and informational features that were identified by Goedegebuure (2013; 2014) for the Hittite ones. Excluding the potentially reconstructable but unattested *anna/i-*, which might have been a distal pronoun, at least in its Hittite occurrences, as a fully integrated and morphologically productive loan (cf. Goedegebuure 2013; 2014, 567), the Luwian system features a two-pronoun system, which seems unlikely to be *synchronically* based on the three-person system.

*Za-* is synchronically proximal and used to pragmatically refer to the present object in the space/time deixis or to an anaphoric element close to the speaker discourse-wise. *Apa-*, on the contrary, consistently features distance from the speaker, but it is attested both as second-person and as third-person proximal, as shown in the following examples (note that in the first case *apa-* is adjectival, while in the second case it is pronominal; this, however, is irrelevant when illustrating its distal deictic meaning):

- [15]      *zwaninzi -ha -wa apanzi kwari asanti*  
 dog.NOM.PL *ha* QUOT that.NOM.PL if be.PRS3PL  
 “If also there are any of those dogs” (... send them to me)<sup>152</sup>
- [16]      ★*apatanza -wa -ta walilidanza aminzi tatinzi*  
 those.DAT.PL QUOT PTCL land.DAT.PL my.NOM.PL father.NOM.PL  
*huhhatinzi -ha huhhadulinzi -ha*  
 grandfather.NOM.PL *ha* forefather.NOM.PL *ha*  
*na huihuissatasi*  
 not march.MP.PST3SG  
 “To those lands my ancestors did not march”.<sup>153</sup>

<sup>152</sup> ASSUR Letter B, §8; Hawkins 2000, 534ff. Text: | (“CANIS”)zú-wa/i-ni-zi-ha-wa/i | a-pa-zi | kwa/i-ri+i-’ | a-sa-ti.

Regardless of the original structure of the deictic referential system, which can only be reconstructed by speculating on the original existence and meaning of the putative third pronoun *anna/i-*, the presence of a *pronominal* demonstrative is in itself an indication of an informationally marked construction, as illustrated above for orthotonic personal pronouns.

#### §4. Indefinites and relatives

While indefinite pronouns and relative pronouns are etymologically related and share some common features and some common forms of structural behaviour, differences exist that depend on their semantics and on the way in which different semantics were encoded at the level of syntax.

##### §4.1. Pronominally used indefinites

When used pronominally, indefinites do not modify a noun; rather, they replace a nominal DP/NP. So, even though they are identical or related to the *wh*-elements, they remain *in situ*, as no syntactic transformation must occur (unless, of course, the constituent is fronted for informational reasons). While it has been shown in Chapter 2, §5., that attributive indefinites undergo Prosodic Inversion, this is not the case when they form a complete constituent by themselves.

Object indefinite pronouns occur in a limited number of partly unclear contexts; they do seem, however, to regularly follow the negation instead of preceding it.<sup>154</sup> Subject indefinite pronouns, on the other hand, *certainly* pattern with the distribution observed by Huggard (2015, 56ff.) for Hittite: when they are weak and open to plain existential reading, they follow the negation quite clearly and consistently (five occurrences with no counter-examples), e.g.:

<sup>153</sup> KARKEMIŠ A11b+c, §8. Hawkins 2000, 103ff. Text: pa-tá-za-pa-wa/i-ta-’ (TERRA+LA+LA)wa/i-li-li-tà-za mi-i-zi-’ | tá-ti-i-zi AVUS-ha-ti-zi-ha | L348.LA/I/U-tà-li-zi-ha | NEG<sub>2</sub>-’ (PES<sub>2</sub>)hwa/i-hwa/i-sà-tá-si.

<sup>154</sup> ALEPPO 2, §11; ASSUR Letter E, §15 and F+G, §31; KARKEMIŠ A23, §7.

- [17] (a) -wa -ada na kwisha muwatta  
 INTR QUOT they.ACC not someone.NOM.SG conquer.PST3SG  
 “No one (had) conquered them”<sup>155</sup>

This confirms the hypothesis that weak indefinite arguments do not climb outside the peripheral area of the verbal phrase.

In terms of a presuppositional reading, guaranteed for instance by the semantics of the general syntactic environment of a conditional protasis, they may climb higher than VP-adverbials, as shown by the following Iron age Luwian example:

- [18] nipa -wa -tta takammi hwisha  
 or QUOT PTCL land.D/L someone.NOM.SG  
 kati tai  
 with.hostility walk.PRS3SG  
 “Or (if) someone comes to the land with hostility”<sup>156</sup>

While the position of Neg seems to be the only safe diagnostic element for the lowest position outside of the verbal phrase proper (cf. Chapter 4),<sup>157</sup> the absence of an example similar to [18] and featuring an *in situ* negation prevents a firm conclusion; the data, however, are certainly consistent with Huggard’s analysis of Hittite argumental *wh*-indefinite pronouns.

#### §4.2. Relative pronouns

Following Huggard (2011; 2015), the *wh*-elements of Hittite generally remain *in situ*, or undergo syntactic or informational movements, which do not depend on typical *wh*-fronting. Essentially, the position they occupy within the relative clause (RC) will depend on its type.

<sup>155</sup> SULTANHAN §44; Hawkins 2000, 467ff. Text: | wa/i-tà | NEG<sub>2</sub>-’ | hwa/i-sa-ha | mu-wa/i-ta. For the sign *HWA/I* used instead of *KWA/I* cf. Hawkins and Morpurgo-Davies 1993.

<sup>156</sup> SULTANHAN §39; Hawkins 2000, 467ff. Text: | ni-pa-wa/i-ta | (“TERRA”)ta-ka-mi-i | hwa/i-sa-ha | ka-ti-i | ta-i.

<sup>157</sup> Huggard 2015, 56ff., takes preverbs and low adverbials to be diagnostic as well; it must be stressed, however, that the Hittite preverbs occupy a higher position in Hittite than they do in Luwian, thus making the situations of the two main Anatolian languages different from each other.

Huggard’s distinction (2015) implies an opposition between the so-called “indeterminate” RCs, in which *wh*-elements belong to a covert conditional correlative structure and appear peripherally because they are fronted reaching an informational functional projection (according to Huggard, FocP), and the so-called “determinate” RCs, in which the *wh*-element remains inside the IP-layer, thus receiving an existential reading. Note that the labels, “determinate” and “indeterminate” RCs, refer back to Held’s work (1957), and have been subsumed by several later works (e.g., Garrett 1994; Hoffner and Melchert 2008, 424f. §§30.58–64); Huggard, however, prefers different labels: *wh*-conditional correlatives and existential (cor)relatives respectively.

While the interpretation of the semantics of the types of RCs will be introduced in Chapter 6 (with a discussion on both pronominal and adjectival *wh*-elements), for the sake of completeness it will now be necessary to illustrate the structural positions occupied by the *pronominal* relative elements, with examples of presuppositional pronouns in focus and an *in situ* existential pronoun.

Presuppositional “indeterminate” RCs produce the linear patterns [XP] [Rel] [clause] and [Rel] [clause]. In [19] the first pattern is represented, with [XP] in contrastive topic position marked by *-pa*; in [20], the *wh*-in focus is the leftmost element in the linear clause:

- [19]      *zati*      *-pa*    *-wa*            URBS-*mini*      *kwis*  
           this.D/L.sg *pa*    QUOT            town.D/L.SG      who.NOM.SG  
           *addulahitari*      *iri*  
           evil.A/I                    come.PRS3SG  
           “Who(ever) comes to this city with evil (intentions)...”<sup>158</sup>
- [20]      *kwis*                    *zan*            *massanin*    *anta iritti*  
           who.NOM.SG            this.ACC.SG    god.ACC.SG    down lay(?).PRS3SG  
           “who(ever) will lay low (*lit.* stretch out) this god”<sup>159</sup>

Existential “determinate” RCs, when preposed, certainly require the N to be spelled out. In this section only the position of pronominal *kwa/i-* is

<sup>158</sup> CEKKE §20; Hawkins 2000, 146ff. Text: | za-ti-pa-wa/i URBS+*MI*-ni kwa/i-sa MALUS-hi-tà-ri+i VERSUS (PES<sub>2</sub>)i+ra/i.

<sup>159</sup> ARSUZ 1/2, §22; Diñcol et al. 2015. Text: | kwa/i-i-sa za-a-na DEUS INFRA-tà | (LONGUS)i+ra/i-ti.

discussed; a more general semantic discussion of RCs will be addressed in Chapter 6. Postponed “determinate” constructions as in [21], on the other hand, may involve a pronominal relative. An example in the hieroglyphic corpus can be found in the KARATEPE 1 inscription, e.g.:

- [21]     *na -wa kwinzi       anna*             PUGNUS.PUGNUS-*lanta*  
           not QUOT who.NOM.PL under           stay.PST3PL  
           *mukasassan       parni*  
           Mopsos.of.D/L     house.D/L.SG  
           “(…and thieves…) who did not dwell in the house of Mopsos”<sup>160</sup>

Here, however, it must be stressed that most RCs in the bilingual are postponed. Note also that the noun to which the pronoun refers (*ussalinsi* “thieves” in the previous sentence) is dislocated postverbally, as is the locative *mukasassan parni* in the RC. The syntactic structure is certainly influenced by the order of constituents of Phoenician, which prevents a safe generalization of the analysis of any of the patterns attested in the Luvo-Phoenician inscriptions of Cilicia (further on this issue, cf. Chapter 6, §2.3.). Other examples are available, however, in which the structure appears to be truly Luwian (e.g. in KARKEMIŠ A2+3. §18).

<sup>160</sup> KARATEPE 1, Hu. §21. Hawkins 2000, 51ff. Text: NEG<sub>2</sub>-wá/i kwa/i-zi | SUB-na-na PUGNUS.PUGNUS-la/i-ta | mu-ka-sa-sa-na | DOMUS-ní-i

## Chapter 4 - The Luwian Verbal and Inflected Phrases

### §1. The core-clause: IP and VP layers

In a generative perspective, the core clause is subdivided into two layers. The verbal phrase proper (vP/VP), that in SVO languages usually contains the verbal head and the direct object, while the inflected phrase (IP) contains inflection-related functional heads and into which, according to most theoretical models, the subject is usually raised. While the subject is assumed to be generated inside the verbal phrase, its raising to a higher hierarchic layer of the clause is connected to the problem of the asymmetry of the verbal arguments, as well as to the ancient bi-partition of the sentence into the subject and predicate.

From a generative perspective, the verbal phrase is a layered structure that consists of two projections (hence the common notation vP/VP), and corresponds to the predication minus the so-called external argument, which, in turn, corresponds to the subject of the clause. The theoretical reasons for a layered analysis of the verbal phrase and a notation vP/VP are beyond the scope of this descriptive study (cf. however Larsson 1988); it will suffice to state that since Huggard (2015) successfully employed this structure to account for the behavior of low indefinite subjects in Hittite, the split-vP/VP hypothesis will be subsumed also in the present work.

As for the inflected phrase, in recent generative frameworks it is also assumed to contain several functional slots related to features that regard the full inflection of the predication. In order to maintain a clear descriptive exposition, I will refrain from employing a too complex jargon, and will try, in the second part of this chapter, to simply refer to the positions occupied by the main elements of the Luwian clause, without attempting to label the syntagmatic position in a cartographic fashion.

### §1.1. Subject and predicate

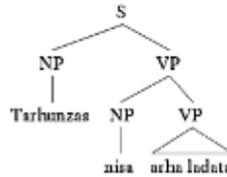
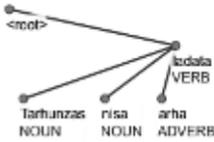
The verbal phrase roughly corresponds to the classical notion of predication. Such a concept dates back to the ancient Greek grammarians, with the subdivision of the clause in *rhēma* (ῥῆμα) and *onoma* (ὄνομα).<sup>161</sup> While philological and philosophical problems, which are too complex for the purpose of the present study, do emerge, if one attempts to give a too strict interpretation of such labels in the earliest works dedicated to language theory, the subdivision of the sentence (or, more precisely, of the clause) into two asymmetric portions has been a recurring topic in the Western study of syntax.

This asymmetric distinction seems to roughly correspond to a functional one between “topic” and “comment”. The “comment”, in a slightly outdated labelling tradition, was also called *rhēma*, which testifies to the metalinguistic difficulties of separating the different levels of analysis of the linear clause architecture even in the languages that have been grammatically studied and described for the longest time. Of course, the modern advancement of linguistics has shown that an identity of the categories of “subject” and “topic” is not trivial: the topic of a clause can easily be different from the subject.

In modern linguistics, the acceptance or rejection of the bipartite interpretation of the inflected clause has distinguished most types of phrase-structure grammars (one may think of the early Chomskyan distinction between NP and VP as main clause-constituents; see Chomsky 1957) from the dependency-oriented valency grammars, originating from Tesnière’s work (e.g., 1956, 1966) and supporting a theory in which the clause virtually and substantially corresponds to the flat predication itself, with the verb being the head to the whole sentence and all other elements that depend on it. In the two traditions, the general syntactic parsing of a very simple unmarked sentence can be exemplified by using a Luvian example from the AKSARAY inscription (§2) and representing it as a verb-headed dependency structure (in the typical style of the CONLL-U initiative, as described at <http://universaldependencies.org/>) and as a highly simplified phrase-structural constituency tree:

<sup>161</sup> E.g. Aristotle, *De Interpretatione* 1, 2-3.

- [1] *Tarhunzas*            *nisa*                    *arha*            *ladatta*  
*T.NOM*                    *nisa.N/A*                    *out*            *prosper(?) .PST3SG*  
 “Tarhunzas prospered(?) the *nisa*’s.”<sup>162</sup>



The reasons for analysing the subject as an external argument are based on several phenomena attested cross-linguistically: different syntactic behaviour of subjects with transitive and unergative verbs, on the one hand, and with intransitive verbs, on the other; asymmetry of the patterns of agreement; and, of course, limits to the rules of clitic extraction from argumental DP/NPs.

### §1.2. External argument in Anatolian

Expanding such argumentation to the analysis of Anatolian is difficult: there are serious limitations to the possibility of appreciating the grammaticality of constructions, which prevents the possibility of confidently identifying a number of expected grammaticality constraints. As regards those constraints that can be inferred from the corpus, however, even the rather simple morpho-syntax of Anatolian can provide some useful insights. The selection of the pseudo-auxiliary (“to be” versus “to have”, neither of which fully grammaticalized into an auxiliary in Anatolian) is limited to a few examples of rare periphrastic constructions in Hittite. While the vast majority of cases in which a participle co-occurs with an inflected form are in fact patient-aligned passive-like predications (cf. Hoffner and Melchert 2008, 339, in particular §25.43), a few verbs do occur in the periphrastic preterite, while the distribution of the pseudo-auxiliary verbs *har(k)-* “to have” and *es-* “to be” seems to roughly match a distinction between transitive and unergative verbs on the one hand, and unaccusative ones on the other (Hoffner and Melchert 2008, 310–311, fn. 7). For the problem of

<sup>162</sup> Hawkins 2000, 476ff. Text: [(DEUS)TONIT]RUS-[h]u-za-sa | ni-sà-’ | *ARHA* | la-tà-ta.

the structural interpretation of the analytic perfect of Hittite in a generative perspective, cf. Sideltsev 2014, 206, and Huggard 2015; since such a periphrastic form does not emerge in Luwian, it will not be discussed.

A further indication of argumenthood asymmetry in Anatolian is the presence of a system of split intransitivity with respect to argument cliticization, as outlined in Chapter 3, §2.2. While split intransitivity has usually been described in terms of morphosyntactic alignment of arguments with respect to agenthood, this kind of explanation is merely descriptive and lies on the level of morphosyntactic rules, which, as a matter of fact, must reflect structural syntactic mechanics. Non-structural semantic explanations can be phrased in various fashions, but they are all reduced to the common idea that some properties of the clitic pronouns do not satisfy the requirements of given classes of verbs, which is an issue that is typical of the majority of purely semantic assessments of the cross-linguistic problem of unaccusativity (cf. Garrett 1990, 145): in Anatolian, in particular, the class of unaccusatives is more easily defined when based on morphosyntax, while proving that unergatives are, in fact, more agentive than unaccusatives is, in some cases, close to impossible. Structurally, however, the pattern of cliticization represents a locality constraint, which must depend on the position and behaviour of arguments with respect to areas of the clause and sentence: the position occupied by the external argument with respect to the head blocks cliticization, while low subjects and objects are located as complements of the verbal head, with cliticization being allowed.

While the usual disclaimer applies, concerning the impossibility of performing grammaticality checks on an extinct language, which is only attested in written form, this kind of split behaviour of a class of pronouns with respect to the degree of transitivity of the predicate positively correlates with the cross-linguistically ascertained asymmetry of the core arguments around the verbal head. Therefore, while reference will be made to the position of all major constituents, in order to highlight VP-internal structures and phenomena, an asymmetric clausal structure and a VP-external location of the structural subject will be assumed in the present work.

## §2. The main elements inside the Luvian vP/VP

While the VP-external collocation of the subject is the first element supporting the hierarchic asymmetry between VP-internal and VP-external clausal elements, a more fine-grained description of the two areas can be attempted, including a description of the position of nominal adjuncts and verbal modifiers.

### §2.1. Verb, core-arguments and VP-level adverbials

Once the final structural position of the external argument (transitive and unergative subject) has been firstly defined in a rough fashion, the linear structure of an atomic Luvian VP would be the one in the following X-bar scheme:

[2]        subject ...            [VP        ...        [V' [NP object]    [V verb]]]

Regardless of the subject, the scheme in [2] features a complement-head order, pointing to a final-headed structure for the Luvian IP-VP system. Since most models of generative syntax assume the Linear Correspondence Axiom (LCA) and require the “deep” order to have the complement follow the head,<sup>163</sup> it would be necessary to assume a different pattern for the VP-IP system, which involves movement to a higher position at the phonetic form. This problem, however, regards all S-O-V languages and can hardly be solved studying extinct languages. A possibility is that the object is raised to an object-agreement dedicated projection that some models label as “AgrOP”. I will refrain from employing such a label and the label “AgrSP” for the yet higher position to which the subject is raised, in order to maintain a reader-friendly jargon and to avoid committing myself to any of the ever-changing models of generative cartography. It will suffice here to assume that argument raising produces the following order in the linear clause:

[3]        Subj        ...        Obj        Verb

<sup>163</sup> The Linear Correspondence Axiom, as enunciated by Kayne (1994), presupposes a universal order in which specifiers precede heads, while heads precede complements at the logical level. This does not, however, strictly imply that the same order is reflected in the linear form of sentences.

It must be added that, unlike V2 languages in which the object is also raised under given circumstances,<sup>164</sup> if a movement of the internal argument occurs towards a higher position, the Luwian and Anatolian verbal head would not move at all. Indeed, it is rather consistently the rightmost element of the clause, regardless of the mood: indicative and imperative forms occupy the same structural position, unless informational fronting of the predicate occurs. Once again, I will not attempt to discuss in detail the conditions that should be met for object raising in the different types of generative syntax. I will limit myself to provide extensive examples that show that the object must end up in a position structurally higher than the IP-vP/VP boundary, because it precedes VP-adverbials (on which cf. Potsdam 1989). It is appropriate to present one example featuring a postposition (ASSUR Letter F+G §52), one example featuring a preverb (KARKEMIŠ A1a §12), and one example with a non-local adverb (KULULU 4, §10):

- [4]     *ti*            *-ha*       *-wa*       *anza*       *tuwan*       *niwarannin*  
           you.NOM   *ha*        QUOT       we.D/L       your.ACC.SG   child.ACC.SG  
           *anni*     L77-*tis*  
           for/to   pledge.prs2sg  
           “You will also pledge a child of yours to us”<sup>165</sup>
- [5]     *a*            *-wa*       *Hazaunan*       *arha*       *hah(h)ataha*  
           INTR     QUOT     H.ACC            away       destroy.PST1SG  
           “I destroyed (the city) Hazauna”<sup>166</sup>

<sup>164</sup> V2 languages, like German, in some configurations feature a movement of the verbal head to a higher position, with a number of consequences that involved its complements and the positions they occupy. In Anatolian, however, there is no evidence that the lexical governor of the predication ever raises outside of the vP/VP area.

<sup>165</sup> Hawkins 2000, 537ff. Text: | ti-ha-wa/i-za | tu-wa/i-na | INFANS-ni-na CUM-ni L77-ti-sa.

<sup>166</sup> Hawkins 2000, 88ff. Text: a-wa/i | ha-za-u-na-na(URBS) ARHA | (“JL218”)há-ha-ta-ha.

- [6] (a) -wa -tta aminzi naninzi  
 INTR QUOT PTCL my.ACC.PL lord.ACC.PL  
 wasu wassamuwahha  
 well please.PST1SG  
 “I pleased my lords well”<sup>167</sup>

The other element which in Luwian regularly occurs between the rightmost argument and the verbal head V, is predicate negation. When the negative element *in situ* is referred to the main predication, it is usually located before it in the linear clause. This can be shown by offering an example with the non-prohibitive negation *na* (KIRŞEHİR Letter §22) and one with the prohibitive *ni(s)* (KARKEMIŞ A11b+c §28):

- [7] (a) -wa -mu 1 ARGENTUM-sa  
 INTR QUOT I.D/L 1 silver.GEN  
 ARGENTUM-za na piyanta  
 ingot/measure.ACC not give.PST3Pl  
 “They did not give me one ingot of silver”<sup>168</sup>
- [8] ★a -wa -tu zitiyantın muwıdan  
 INTR QUOT he.D/L male.ACC.SG seed.ACC.SG  
 nis lanti  
 not take.PRS3SG  
 “For him may (the gods) take (= introduce to some sort of afterlife?)  
 no male progeny”<sup>169</sup>

Since variations in the position of the negation can be explained in terms of informational movement, a phrasal interpretation of the negative elements will be assumed, while the Luwian *na* and *ni(s)* will be treated as the projecting heads of a dedicated phrase (NegP).<sup>170</sup> We can thus

<sup>167</sup> Hawkins 2000, 445ff. Text: | wa/i-ta á-mi-zi-i DOMINUS-ni-zi | wa/i-su u-sa<sub>4</sub>-nú-wa/i-ha

<sup>168</sup> Giusfredi 2010, 236ff. Text: | wa/i-mu-u 1 ARGENTUM-sa ARGENTUM-za-’ NEG<sub>2</sub> pi-ia-ta

<sup>169</sup> Hawkins 2000, 104ff. Text: wa/i-tú-’ | VIR-ti-ia-ti-i-na | (L462)mu-wa/i-i-tà-na NEG<sub>3</sub>-sa | CAPERE-ti-i.

<sup>170</sup> There are no reasons to justify the assumption that two different positions should be distinguished for the two types of negation. As in all other cases, this does not mean that there were no dedicated slots for the two different

sketch two provisional precedence-schemes for the standard collocation of the VP-adverbials and negative elements:

[9a] IP-arguments > vP/VP-adverbial > verb

[9b] IP-arguments > NegP > VP

In the cases in which a preverb and a negation co-occur, the standard order is usually:

[9c] IP-arguments > NegP > AdvP > verb

[9d] ... *urwadanza* *ni* *sarra* *awiti*  
 ... seed.N/A.PL not up come.PRS3SG  
 “... seeds will not come up”<sup>171</sup>

In unmarked sentences, higher adverbials (S-adverbs in the terminology by Potsdam 1989), will on the contrary emerge before the negation, as they belong to the IP layer or even higher (cf. below §3.2):

[9e] *apparanta* *-pa -wa* 9 BOS-*za* *sasarlanti*  
 afterwards *pa* QUOT 9 ox.N/A.SG offer.PRS3PL  
 “Afterwards they will offer 9 oxen”<sup>172</sup>

This is consistent with an analysis of the preverb occupying a vP/VP-internal position and of the NegP as a lower-IP node; as shown in Chapter 3. §4.1., it is also consistent with Huggard’s tentative analysis of the indefinite subject as an *in situ* argument.

Besides preverbs, it is noteworthy that the limited number of adverbials of manner present in the Luwian corpora seem to always occur in low positions: out of six occurrences of *sannawa/i* “well, in a healthy fashion” in the hieroglyphic corpus, the two that belong in sentences containing more than two elements are definitely preverbal:

operators: simply, the available data do not allow for a distinction to be identified.

<sup>171</sup> ALEPPO 2, §16; Hawkins 2000, 235ff. Text: | (“L471”)u!-ru-wa/i-tà-za | ní-i | SUPER+ra/i-’ | PES-wa/i-ti.

<sup>172</sup> MARAS 5 §2; Hawkins 2000, 270ff. Text: POST+ra/i-tá-pa-wa/i “9” BOS(ANIMAL)-za-’ (LIBARE)sá-sa5+ra/i-la-ti

- [10a] *amanza -ha -wa -fta naniyan-za parnan-za*  
 my.ACC.PL *ha* QUOT PTCL lord.of.N/A.SG houses.N/A.SG  
*sannawi usanu(wa)hha*  
 well bless.PST1SG  
 “I blessed well also the temple of my lord”<sup>173</sup>
- [10b] *nani -ha -wa L179.L347.5 sannawi*  
 lord.D/L.SG *ha* QUOT L179.L347.5 well  
*anta ari*  
 in raise.IMP2SG  
 “Raise well also the L179.L347.5 for the lord”<sup>174</sup>

The distribution of *wasu*, also meaning “well” but in a moral, benefactive acceptance, is similar, with ca. 10 diagnostic occurrences in direct preverbal position, e.g.:

- [11] (a) *-wa -mu aminzi tarpunallinzi*  
 INTR QUOT I.D/L my.NOM t.NOM  
*wasu apparanta awiti*  
 well behind come.PRS3SG  
 “And for me my t.’s hereafter will come well”<sup>175</sup>

Whether the relative order of the adverb of manner and the adverb of time follows a specific syntactic pattern is impossible to tell because of the limits of the corpus. In all of these cases, however, it must be noted that the adverb seems to work closely with the verbal head, producing a lexicalized idiomatic unit: “come well > favour (vel sim.)”. Besides *sannawi* and *wasu* (the former only occurring in hieroglyphic texts; the latter attested both in the hieroglyphic and in the cuneiform corpus), among the adverbials that exhibit this behaviour are the following forms: *ariya* (“solemnly(?)”, combined with verb *iziya-* “make” as in “exalt”), *hatamma* (“terribly” combined with *tarpi-* “trample” as in “attack”), PUGNUS-*lummi* (“strongly”, with *ariya-* “raise”). *wariyama(l)la* (“comfortably”, with *as(a/i)-* “dwell”); and, in the

<sup>173</sup> KARATEPE 1 Hu, §14; Hawkins 2000, 45ff. Text: | á-ma-||za<sub>4</sub>-há-wá/i-ta | DOMINUS-ní-za | DOMUS-na-za | (BONUS)sa-na-wá/i |u-sa-nú-há.

<sup>174</sup> ASSUR Letter E, §21; Hawkins 2000, 535ff. Text: | DOMINUS-ni-ha-wa/i L179.L347.5 | sa-na-wa/i | a-ta<sup>-i</sup> | PUGNUS-ri+i<sup>-i</sup>.

<sup>175</sup> KARKEMIŠ A5a §11; Hawkins 2000, 182ff. Text: wa/i-mu-u á-<mi>-zi <ta/ri>-pu-na-li-zi | (LIGNUM)wa/i-su | <POST>+ra/i-ta | á-wa/i-ti.

cuneiform corpus, also GU<sub>4</sub>.MAH-*li* (“powerfully”, with *wita*-“smash”).

## §2.2. Dative and ablative/instrumental DP/NPs

So far, it has been possible to identify the following elements as generated in or belonging to the vP/VP of Luwian:

1. verbal head – head of the VP, remains *in situ* in the unmarked sentences;
2. direct object - complement to the verb, then moved to a higher position;
3. unaccusative subject – also a complement to the verb, then moved to a higher position (see below, §3., for further discussion on the IP-layer);
4. vP/VP-level adverbials and preverbs.

Negation, on the other hand, has been shown to be the head of the lowest phrase that belongs outside of the vP/VP. Being an inflected language, however, Luwian also encodes other nominal participants of the predication as inflected nominal phrases (dative indirect objects, ablatives and instrumental elements) or as post-positional phrases.

Semantically, datives can be arguments (e.g. a dative object depending on the trivalent verb *piya*- “to give”) or modifiers of the predication (e.g. a dative of a beneficiary/maleficiary). When dative-complements belong to the valency of the verb, it should be assumed that they are generated inside the vP/VP, and then moved up to a higher position, in the IP layer. Distributionally, dative DP/NPs seem to occupy a slot higher than the direct object in the accusative, but there are very few sentences that contain both types of orthotonic constituents (one or both being frequently cliticized). One relevant example here is KÖRKÜN §7.

- [12]    *apas*    *-pa -wa*    *zati*    *massani*  
 he.NOM   *pa*   QUOT   this.D/L.SG   god.D/L.SG  
*X-ra/is(a)*   *ashana(t)ti(s)san-za*   *piyattu*  
 ?.GEN    blood-offers.N/A.SG   give.IMP3SG  
 “May he give to this god the blood offering of X”<sup>176</sup>

<sup>176</sup> Hawkins 2000, 173ff. Text: | á-pa-sa-pa-wa/i za-ti | DEUS-ni | X+RA/I-sa | á-sa-ha-na-ti-sa-za | pi-ia-tu.

An inverted order, with an accusative constituent that precedes the dative DP/NP, is also attested, especially in the syntactically brachilogic KULULU Lead Strips (e.g. KULULU Lead Strip 2, §1).

- [13]     32       *hawin*   *Muwahis*       *Niya*   *piyai*  
           32       sheep.ACC M.NOM           N.D/L   give.PRS3SG  
           “Muwahis shall give 32 pieces of sheep to Nis”.<sup>177</sup>

Here, however, the direct-object is clearly topicalized, as it also precedes the subject and occupies the leftmost position.

To be fair, the ca. 90 occurrences of the trivalent verb *piya-* in the general corpus (inclusive of both cuneiform and hieroglyphic texts) are not conclusive with regard to the position of an argumental dative DP/NP. Besides the example from the KÖRKÜN inscription, and the merely apparent counterexamples from the Lead Strips, there are no further specimina that help to evaluate the general clause architecture involving both a dative and an accusative argument. Particularly problematic is the fact that, when working on the available examples, one cannot exclude the possibility that the position occupied by *zati massani* in sentence [12] is left-peripheral, which prevents a proper generalization of the argumental linear order. In general, it must be stressed once again that the amount of available material that can be used for the purpose of distributional analysis is, in this case, very small. As such, the assumption that the indirect object precedes the direct object in the unmarked clause architecture remains speculative.

The Luwian ablative and instrumental DP/NPs coincide morphologically. Given the different semantics involved, they probably represent two different types of phrases, but there is no way to distinguish their positions.

- [14]     ★*amu*   *-pa*       *-wa*.   *-tu*   *zaya*       *Tarhunzas*  
           I.NOM   *pa*        QUOT he.DAT this.N/A.PL   T.GEN  
           DEUS.DOMUS-*da wassarati*   *zala* L261.PUGNUS-*ru(h)ha*  
           temple.N/A.PL       goodness.A/I then build.PST1SG  
           “Then I built for him (these) temples of Tarhunzas with goodness”<sup>178</sup>

<sup>177</sup> Hawkins 2000, 510ff. Text: (OVIS)ha-wa/i-na <sup>1</sup>mu-wa/i-hi-sá <sup>1</sup>ni-ia | pi-ia-i.

- [15]   ★*a* -*wa tarpammanza maralisanzi BRACCHIUM-rulinzi*  
 INTR QUOT way/path.D/L.PL   *m*.ACC.PL    B.ACC.PL  
*taskwirati                   arha       L501-ha*  
 earth.A/I                   away     drive.PST1SG  
 “I drove the *m.*’s (and) the *B.*’s away on the paths from the earth”.<sup>179</sup>

The distribution seems to indicate a standard position lower than that of accusative objects. However, the usual disclaimer applies: the corpus contains 12 sentences in which an orthotonic ablative/instrumental, an orthotonic accusative and an orthotonic dative co-occur. Of these, three certainly feature a fronted ablative DP/NP in the topic position (BULGARMADEN §7, KARKEMIŠ A6 §15 and §17), two feature a fronted accusative (KARKEMIŠ A11a §20 and KARKEMIŠ A11b+c §37), and one might feature a PP composed by an ablative DP/NP and *arha*, but *arha* is, in this case, likelier to be a preverb (JISR-EL-HADID frgm. 3, cf. above example [15]).

### §2.3. Post-positional phrases

The formal treatment of the internal structure of a PP is rather unproblematic, except for the compatibility of final-headed PPs with the predictions of the LCA, which, as usual, will not be discussed here.

As for clause architecture, however, the interpretation of the position that PPs occupy as base-generated or raised elements is not trivial. Distributionally, PPs can be in identical distribution with respect to different types of elements, pointing to different possible projections depending on the function they have and on their relationship with the predication. For instance, the construction in KARATEPE 1 Hu. §22 (with a parallel in BOR §9, which guarantees that the pattern is not a result of Phoenician influence):

<sup>178</sup> KARKEMIŠ A2+3 §9; Hawkins 2000, 109ff. Text: mu-pa-wa/i-tu-’ | za-ia (DEUS)TONITRUS-sa DEUS.DOMUS-tà BONUS-sa<sub>5</sub>«+ra/i»-ti-i za-la L261.PUGNUS-ru-ha.

<sup>179</sup> JISR EL-HADID; Hawkins 2000, 379f. Text: wa/i-’ (“PES<sub>2</sub>.PES”)tara/i-pa-ma-za | (LOQUI)mara/i-li-i||-li-i-sa<sup>2</sup>-zi | BRACCHIUM-la/i/u-zi “TERRA”-kwa/i+ra/i-ti-i | *ARHA* | L501-ha.

- [16]     *amu*     *-pa*     *wa*     *-mu*   *-ada*     ... *padanza*  
 I.NOM    *pa*        QUOT    me.D/L   they.ACC   feet.d/l  
*annan*   *tuwahha*  
 under    put.PST1SG  
 “I put them under my feet”<sup>180</sup>

features a PP that represents a proper valency-filling argument, but the absence of an orthotonic object does not permit further observations on the relative position of the arguments; furthermore, since *tuwa-* is likely to be a tri-argumental verb, the PP should be generated as an argument in a complement position to a vP/VP internal head, and then moved to an IP-internal position.

PPs that are not arguments are in identical distribution with respect to vP/VP-level local adverbials; there is, however, no distributional evidence that they land in a position different from the one assigned to PP-arguments:

- [17]     (a)       *-wa*     *-mu*     *zati*     ...  
 INTR    QUOT    me.ACC   this.D/L.SG  
*Tarhunti*     *parran*   *arawanta*  
 Tarhunza.D/L.SG   before   set.free.PST3PL  
 “They set me free in front of this ... Tarhunzas”<sup>181</sup>

### §3. Elements of the IP-layer

The reason why the IP-layer must exist is cross-linguistically valid and relies on the need for one (or more) positions that is(/are) neither V-headed nor functionally explainable as belonging to the informational periphery proper. In other words, the IP is at least the position in which subject and verbal phrase agree, and its head (or a set of heads inside a split-IP) must govern the operations of agreement between the subject phrase and the predicate. In a more general perspective, and for the

<sup>180</sup> Hawkins 2000, 51ff. Text: á-mu-pa-wá/i-ma-tà | (LITUUS)á-za-ti-wa/i+ra/i-sá | (“PES”)pa-tà-za | SUB-na-na | PONERE-há.

<sup>181</sup> ADANA 1 §2; cf. Hawkins 2000, 71ff. (no text offered), Akdoğan, Tosun and Hawkins 2013. Text: wa/i-mu | za-ti (“MÁ”)ma-sa-hu-na-li (DEUS)TONITRUS-hu-ti PRAE<sup>?</sup> a+ra/i-wa/i-ta.

purpose of a descriptive study as this one, it is the target of any raising that affects the elements of the vP/VP and that is not directed to the left periphery. Earlier in this chapter, movements of some constituents from inside the vP/VP to IP-internal positions have been hypothesized. Summing up, the IP-layer contains heads that host grammatical features.

### §3.1. Raised arguments and negation

In previous works, notably Huggard (2015, 138), while the theoretical details have only been hinted at, the S-O-V order of the main constituents of the Anatolian sentence is interpreted as derived by assuming the presence of “strong features” to be checked, located in the agreement phrases inside the IP. In the strongest formulation of minimalism (e.g., Chomsky 1995), it has been suggested that the agreement phrases may be dispensed with, and replaced by multiple “specifier” positions (in recent works by Chomsky, e.g., 2013, even the concept of specifier – the non-head element that has scope over a whole constituent, has been challenged). This is, once again, a theoretical “labelling” issue; in order to reduce the amount of jargon employed, I will merely refer to the relevant positions using the names of the arguments they host. Basing on the attested sentences, the Anatolian IP layer must have contained *at least*:

1. one final position for the subject;
2. one final position for the regularly raised object
3. one position for negation, which is generated *in situ* as the head of a NegP.
4. one or more positions for indirect objects, the positions of which can only be tentatively identified due to the limited number of sentences containing a sufficient number of co-occurring non-clitic DP/NPs inflected in different cases.

Of these positions, NegP is the only one that is not assumed to host raised or incorporated content, but rather base-generated material.

### §3.2. Sentence-level adverbials

While the position of low adverbials can be explained as occupying a position inside the vP/VP, the cross-linguistic evidence demonstrates that adverbials also exist which must occupy higher positions in the architecture of the clause (Potsdam 1989). Evidence for high adverbials in Luwian is sparse, on account of the following two reasons:

1. the number of attested adverbs that are not preverbs or place-words is very modest;
2. most of the attested high adverbials clearly occur in left-peripheral positions and not inside the IP-layer.

Consider for instance the position in the clause occupied by the local adverbial *apin* “there, on that side”, in the following example:

[18]     ★*a*   -*wa*   -*tta*     ★*apin*   [...]*L286-waninzi irhanzi*  
           INTR QUOT PTCL   there   [...]*L286.of.ACC.PL borders.ACC.PL*  
           *appani anta     izida*  
           behind   into     make.PST3SG  
           “On that side, afterwards, he added the borders of the city L286”<sup>182</sup>

While it was shown in §2.1. that manner adverbs in Luwian always seem to emerge *in situ* inside the vP/VP, and in some cases very likely belong to lexicalized idiomatic units, place and time adverbials can share the same behaviour as *apin* in [18]. For the position to be unambiguous, checking it against the lower boundary of the informational peripheral area would be useful, but the limits of the corpus prevent a safe assessment. In all likelihood, the left-peripheral position of this class of adverbials must be identified as a topic slot, in this case employed for “scene-setting” information.

#### §4. “To be” and copular clauses

Cross-linguistically, copular clauses tend to exhibit a special behaviour when compared to clauses containing other inflected verbs. There are, for instance, languages that systematically use null-copula, languages that employ different strategies, languages that distinguish the existential and copular forms of the “be”-predication, and languages that employ strategies depending on the specific features of the involved nominals (e.g., different constructions for different pronominal persons). A recent overview on such strategies can be found in Moro (2013, 10–15) and

<sup>182</sup> IZGIN 2 §4; Hawkins 2000, 315ff. Text: *wa/i-tá-’ pi-[na]-’* || [...]*L286-wa/i-ni-zi(URBS) FINES+HA-zi POST-ni* || *a-tá i-zi-i-tà*.

Stassen (1997, 76–100 and 2013).

#### §4.1. Patterns of copular clauses

Strictly speaking, copular clauses in Luwian can be built by either using the verb *as-* “to be”, or resorting to null-copula. Meanwhile, copular clauses also universally include types of predicates which are different from “to be”. Besides the verb *as-*, other verbs that can construct predicative copular clauses in Luwian are the medio-passive forms of the verbs *aya-* and *iya-* (“to do, make”), with the meaning “to become”, combined with a predicate noun.

- [19a] *amu -wa -mi Ruwas*  
 I.NOM QUOT REFL.1SG R..NOM  
 “I am Ruwas”<sup>183</sup>
- [19b] *u -mi kuwalanas urazzas asha*  
 QUOT REFL.1SG army.GEN.SG big.NOM.SG be.PST1SG  
 “I was the Great of the Army”<sup>184</sup>
- [19c] *pa -ti kuwatin tappas-sa tiyammis*  
 INTR REFL.2SG as sky.NOM.SG earth.NOM.SG  
*nawa ayari*  
 not become.PRS3SG  
 “As the sky does not become earth...”<sup>185</sup>

Obviously, the predicate noun could also be an adjective with predicative function (for cases in which it was a verbal noun or a participle, see §§4.2.-3., below):

- [20] *a -ada halal asdu*  
 INTR it.N/A pure.N/A.SG be.IMP3SG  
 “May it be pure”<sup>186</sup>

<sup>183</sup> KULULU 1 §1; Hawkins 2000, 443ff. Text: | EGO-wa/i-mi <sup>1</sup>Ru-wa/i-sá.

<sup>184</sup> PORSUK §5; Hawkins 2000, 528. Text: | u-mi-i | EXERCITUS.LA//U-na-sa 8 | MAGNUS+ra/i-za-sa á-sa-ha.

<sup>185</sup> KUB 35, 54 ii 42f.; Starke 1985, 65ff. Text: pa-a-ti ku-wa-a-ti-in [tap-pa]š-ša ti-ya-am-mi-iš na-a-wa a-a-ya-ri.

<sup>186</sup> KUB 35, 54 iii 25f.; Starke 1985, 65ff. Text: a-ta ha-a-la-al as-du.

While the exact semantics of some fragmentary examples may be hard to grasp, copular clauses seem to consistently feature a linear precedence of the subject over the predicate noun, unless, of course, the subject is dropped. In the case of a dropped subject, the predicate noun can occupy the leftmost position in the clause, given that it is the only nominal constituent available and, in all likelihood, the highest sentential topic.

- [21]     *tanimassis*        -*ha*        -*wa*        -*mi*  
           every.of.NOM.SG   *ha*        QUOT     REFL.1SG  
           *tatis*  
           father.NOM.SG     be.PST 1SG  
           ‘‘I was also everybody’s father’’<sup>187</sup>

Whenever the subject is represented by a first or second person, a clitic dative-reflexive pronoun regularly occurs in the usual peripheral slot where all sentential clitics land, regardless of the presence or absence of an overt copular verb. It does not represent a replacement for a dropped subject, because it regularly co-occurs with orthotonic subject DP/NPs. Structurally, the Luvian copular clauses seem to be consistent with a raised analysis of the subject.

- [22]     [[subject(-reflexive)] [[...] [[predicate-noun] [(copula)]]]]

It is noteworthy that, while the copular clauses seem to generally require the subject to be raised and outscope the non-prominent predicate noun, the copular verb does not pattern with bi-argumental verbs with respect to the constraints to cliticization,<sup>188</sup> but rather with the unaccusative intransitive verbs: if no orthotonic subject is overtly expressed, it allows, and perhaps requires, the presence of third-person clitic subjects, e.g.:

<sup>187</sup> KULULU 4 §11. Hawkins 2000, 445ff. Text: OMNIS-ma-si-sa<sub>4</sub>-ha-wa/i-mi tá-ti-sa<sub>4</sub> á-sa<sub>8</sub>-ha.

<sup>188</sup> In Italian, for instance, *essere* ‘‘to be’’ and transitive verbs pattern alike with respect to the rules and constraints of extraction of the partitive clitic *ne*, suggesting structural analogies. They allow cliticization from the object and from the predicate noun, but not from the subject, as opposed to unaccusative verbs that mostly allow cliticization from the subject (cf. Burzio 1986; also Bentley 2006, 251, for follow-up studies and possible exceptions).

[23]	<i>zin</i>	<i>-man</i>	<i>-pa</i>	<i>-wa</i>	<i>-as</i>	
	here	whether	<i>pa</i>	QUOT	he.NOM	
	<i>hantawalis</i>		<i>niwarannis</i>			
	king.of.NOM.SG		son.NOM.SG			
	<i>man</i>	<i>-pa</i>	<i>-wa</i>	<i>-as</i>		REGIO.DOMINUS
	or	<i>pa</i>	QUOT	he.NOM	country-lord	
	<i>man</i>	<i>-pa</i>	<i>-wa</i>	<i>-as</i>		FLUMEN.REGIO.DOMINUS
	or	<i>pa</i>	QUOT	he.NOM	river-country-lord	
	“On this side, be he the son of a king, or a country-lord, or a river-country-lord” <sup>189</sup>					

#### §4.2. Copular clauses and predicative verbal nouns

A peculiar type of Luwian copular structures is represented by the patient-aligned verbal nouns in *-mina* and (possibly) the agent-aligned ones in *-w(a)r(a)*, which are only attested in the hieroglyphic corpus and consistently occur in the predicative position in verbless clauses. The *-mina* verbal nouns, sometimes labelled as “gerundives” (cf. Chapter 1, §4.2.3.), possess a modal/final semantics. They are not adjectival and exhibit no inflexion and no agreement patterns with the subject noun, which, however, can be either an orthotonic DP/NP or a clitic subject:

[24]	<i>a</i>	<i>-wa</i>	<i>FINES-hinzi</i>	<i>tuwamina</i>
	INTR	QUOT	boundary(stone).NOM.PL	to.be.put
	“Boundary-(stones) (are) to be put” <sup>190</sup>			
[25]	<i>api</i>	<i>-wa</i>	<i>-ada</i>	<i>hantawatiyari</i>
	further	QUOT	they.NOM	royal.A/I
	<i>tapariyati</i>		<i>iziyamina</i>	
	authority.A/I		to.be.made	
	“Further they (are) to be made by royal authority” <sup>191</sup>			

<sup>189</sup> ALEPPO 6 §§7-9; Hawkins 2011. Text: *zi-ma-pa-wa/i-sa REX-la/i/u-sa || (VIR<sub>2</sub>)INFANS.NÍ-sa ma-pa-wa/i-sa REGIO.DOMINUS ma-||-pa-wa/i-sa FLUMEN.REGIO.DOMINUS*. Construction is very frequently attested in the corpus.

<sup>190</sup> CEKKE §19; Hawkins 2000, 146ff. Text: *a-wa/i FINES-hi-zi PONERE-mi-na*.

<sup>191</sup> SULTANHAN §41; Hawkins 2000, 467ff. Text: | *á-pi-i-wa/i-tà-’* | *REX-ti-ia-ri+i* | *LEPUS+ra/i-ia-ti-i* | *i-zi-ia-mi-na-’*.

Given their morphosyntactic alignment and the absence of inflection, the *-mina* forms are to be analysed as substantival, while the clauses that contain them perfectly match null copular clauses, in which the *-mina* form is the predicate noun.

The case of the possible *-w(a)r(a)* verbal noun, which features an active semantics, is more obscure. First of all, the inflected forms of the noun are probably to be kept separate from the uninflected or crystallized nominative-accusative in *-w(a)r(a)*. If one considers the possible occurrences of the uncertain form *hatura-*, “writing(?)”, it will be evident that some of them appear to be fully inflected and represent DP/NP-arguments or complements in regular predications and even the subjects of copular clauses:

- [26] (a) *-wa -mu haturan na manuha*  
 INTR QUOT I.D/L writing(?)<sub>.ACC.SG</sub> not at.all  
*pupalatta*  
 write.PST2SG  
 “You did not write me any letter(?)”<sup>192</sup>
- [27] *kwis -wa -as anzis haturas*  
 which.NOM QUOT he.NOM.SG our.NOM.SG writing(?)<sub>.NOM.SG</sub>  
 “What is it, our letter(?)?”<sup>193</sup>

while the crystallized form in *-w(a)r(a)* acts as a predicate noun with a modal/final nuance similar to the *-mina* nouns.

- [28] *anzanz -ha -wa -anza api hatura*  
 we.NOM *ha* QUOT REFL back to.write(?)  
 “Are we also/even(?) to write(?) back?”<sup>194</sup>

Note that in all 15+ crystallized *-w(a)r(a)* forms in the position of predicate nouns in the corpus the subject is also marked by a dative-reflexive pronoun, which confirms that the environments of occurrence

<sup>192</sup> ASSUR letter A §5; Hawkins 2000, 534ff. Text: | wa/i-mu<sup>i</sup> | ha-tu+ra/i-na | NEG<sub>2</sub>-’ | ma-nu-ha | (“LOQUI”<sup>(-)</sup>)pu-pa-la-ta.

<sup>193</sup> ASSUR letter F+G §9; Hawkins 2000, 536ff. Text: | kwa/i-sà-’-wa/i-sa-’ | a-zi-sa | ha-tu-ra+a-sa.

<sup>194</sup> ASSUR Letter E §4; Hawkins 2000, 535ff. Text: | a-za<sub>5</sub>-za-ha-wa/i-za | á-pi | ha-tu-ra+a.

are in fact null copular clauses.<sup>195</sup> That no such case is attested with the *-mina* forms is accidental, as no attestation of *-mina* has a first- or second-person subject, while all attestations of the *-w(a)r(a)* forms do.

#### §4.3. *as-* with participle: periphrastic verbal forms or copular clauses?

As previously stated, Luwian features an apparent periphrastic construction with the verb *as-*, “to be”, and a participle. The semantics is certainly patient-aligned, with the subject being similar to the subject of a passive construction; contrary to Hittite, no agent-aligned periphrastic form with the pseudo-auxiliary “to have” is attested. There are less than one dozen occurrences in the cuneiform Luwian corpus, all of which are inflected in third-person imperative:

- [29a] <sup>NA4</sup>*uwanitaimman asdu* *taparu*  
 petrify.PTCP.N/A.SG be.IMP3Sg manipulation.N/A.SG  
 “May the (evil) manipulation be petrified”<sup>196</sup>
- [29b] *pa nahhusahiti kuwanzunimman asdu*  
 INTR status.of.scapegoat.D/L endow.PTCP.N/A.SG be.IMP3SG  
 “May it be endowed with the status of scapegoat”<sup>197</sup>
- [29c] *launaimmis -as asdu*  
 wash.PTCP.NOM.SG he.NOM be.IMP3SG  
 “May he be washed”<sup>198</sup>

Judging from the attested evidence, it is hard to establish whether these forms are identical to copular clauses with a participle used as predicate noun, or whether they belong to a restructured periphrastic verbal paradigm. Since the semantics of all the examples implies an action to be performed or an event to take place, in order to produce a change of state in the subject, it is possible that the forms sometimes represented a

<sup>195</sup> There are 16 occurrences of the problematic word *hatura*, all of them in the ASSUR Letters (Hawkins 2000, 535ff.); of these, only one single case presents overt copula: ASSUR Letter E §6.

<sup>196</sup> KUB 35, 70 ii 17; Starke 1985, 183ff. Text: <sup>NA4</sup>u-wa-ni-i-ta-im-ma-an a-aš-du ta-pa-a-ru.

<sup>197</sup> KUB 35, 15 iii 4f. (integrated with duplicate KBo 9, 141 iv 18); Starke 1985, 127f. Text: pa-a n[(a-ak-ku-uš-ša-a-hi-t)i] ku-wa-an-zu-ni-im-ma-an a-aš-du.

<sup>198</sup> KUB 35, 54 iii 34; Starke 1985, 65ff. Text: la-a-ú-na-i-mi-ša-aš a-aš-du.

peri-phrastic alternative to a passive form; however, as all of them are imperatives, the semantics may very well depend on that, rather than acting as an intrinsic feature of the periphrastic construction. As for word order and alignment, example [29a] has the predicate noun preceding the subject, example [29b] features a dropped subject (which is unusual for “to be” clauses and points to the lexical-semantic contiguity to a passive periphrastic use), and [29c] features the participle in the leftmost position of the sentence, with the subject being a clitic pronoun inflected in the nominative singular *generis communis* (which, judging from the extended context from which the quote is extracted, seems to introduce a list of subjects that are right-dislocated discourse-wise; cf. Starke 1985, 65ff. for the entire passage). It is also important to recall that all these examples derive from Kizzuwatna Luwian texts, which might have been influenced by the Hurrian syntax or by the word-order of original Hurrian versions, as outlined by Rieken (2010). A single occurrence of this construction exists in which the verb is in the indicative. It is the only example attested in the hieroglyphic corpus:

[30]     *a*            *-wa*        *zaya*                    *parna*        ...

          INTR     QUOT     this.N/A.PL            house.N/A.PL

*sahizi*    *asanta*                    *ha(t)tamma*

*s.?*        be.PST3PL                demolish.PTCP.N/A.PL

          “*And these houses were demolished for(?) s.*”<sup>199</sup>

In [30], the stative semantics seems to be closer to that of a copular clause, as no change of state is involved, while the participle *ha(t)ta(m)ma* is used in the same way as a predicative adjective (a less likely but still possible analysis may even take *ha(t)ta(m)ma* as a substantive for “ruins”). Note, however, the unusual word order, with the inflected copula clearly preceding the participle instead of following it (a unique case that is more likely to be on account of epigraphic reasons or on a scribal mistake than on syntactic movement).

In hieroglyphic Luwian, the copular verb *iziya-* (mediopassive), “to be made, become”, also takes a participle as the predicate noun in at least one case:

<sup>199</sup> KULULU 1, §2; Hawkins 2000, 443ff. Text: | a-wa/i | za-ia [|] DOMUS-na-  
 [?] s]a-hi-zi-i | á-sá-ta | ha-ta-ma.

[31]    ★*a*        -*wa*        -*as*        *massanza* CAPUT-*tanza* -*ha*  
 INTR        QUOT        he        god.D/L.PL    man.D/L.PL    and  
 L366-*nan Tarhuntati*        *tatariyammis*        *iziyaru*  
 ???        T.A/1        curse.PTCP.NOM.SG    be.made.IMP3SG  
 “May he be made cursed in front of(?) gods and men by Tarhunzas”<sup>200</sup>

In this case, a change-of-state semantics is present, but it is encoded by the inflected verb rather than by the participle, so that the analysis as a copular clause may be preferred.

Comparing the available data, the safest analysis of *as-* + participle in Luwian is that, in some cases that occur exclusively in the cuneiform corpus, it is possible for the form to encode a periphrastic quasi-passive (either fully or partly grammaticalized); in other cases, however, the participle was probably used as the predicate noun of a copular construction.

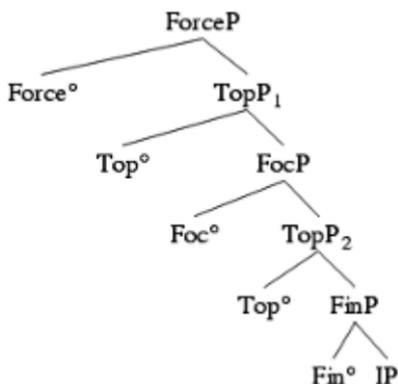
<sup>200</sup> KARKEMIŠ A2+3, §24; Hawkins 2000, 110ff. Text: *wa/i-sa-ʾ* | DEUS-na-za | CAPUT-tá-za-ha | L366-na-na | (DEUS) TONITRUS-tá-ti-i | (LOQUI)ta-tara/i-ia-mi-sa i-zi-ia-ru.

## Chapter 5 - The Luwian Sentence: Periphery and Core

### §1. Defining “sentence”

From a generative perspective, a sentence can be seen as the sum of the three layers: the IP and vP/VP as discussed in the previous chapter, and the left-periphery, which has been traditionally labelled CP (“complementizer phrase”). The structured layers of IP and vP/VP represent the inflection-headed predication with a fully saturated verbal valency and with IP-internal functional projections, which host specific classes of modifiers. Since the IP takes the vP/VP as a complement to its own lowest projection (NegP in the reconstruction proposed in the previous chapter), the entire sentence can be represented as a functional left periphery (CP) dominating the IP layer.

Along with hosting the complementizers and left-peripheral subordinators of certain languages, the CP is also the part of the sentence that contains some informationally marked positions, such as the ones occupied by topicalized material and elements in focus. According to Rizzi (1997, 283), the universal structure of the informational projections in the CP should contain the sequence Topic > Focus > Topic, with the possible iteration of hierarchically undercategorized topical elements and one non-recursive position for the *foci*. This sequence is preceded by the phrase of “illocutive force” (ForceP), which hosts some high subordinators of the Romance languages (e.g., Italian *perché*) and manages the interface between sentence and discourse, then followed by a position dedicated to finiteness-assigning complementizers (FinP) and more generally to the interface between the left periphery and the core clause.



In more recent works, a more articulated pattern has emerged.<sup>201</sup> The leftmost topic projection (TopP) is preceded by the position of an illocutive force (ForceP), then followed by positions dedicated to interrogative elements (IntP), fronted adverbs (ModP), embedded *wh*-questions (QembP) and finiteness-assigning complementizers (FinP). When describing Anatolian, some of these distinctions are difficult to detect. Furthermore, as will be argued, the highest position of the Anatolian clause, i.e. the one that emerges as the leftmost peripheral position in the linear sentence, has a peculiar role in the generalized clause architecture of Luwian, as it usually hosts “connectives”. As it will be discussed in the two final chapters, it is no trivial task to make it correspond to a specific informational slot in Rizzi’s model. As usual, I will try to maintain a descriptive attitude, using rather neutral positional labels without forcing the theory onto the data.

For the present discussion on the Anatolian clause architecture to be complete, the left-periphery shall now be analytically taken into consideration.

<sup>201</sup> I am presenting the model by Rizzi (2004). On the cartography of the left periphery, see also the works by Benincà (2001; 2006); Benincà and Munaro, eds. (2011); Benincà and Poletto (2004). The cartographic models have been criticized for being too articulated; in particular, one may argue that the principle that a head must exist for each feature to be checked produces a virtually unfalsifiable and uneconomical scheme for Universal Grammar. See for instance Craenenbroeck, ed., 2009.

## §2. “Connectives” in the leftmost slot

As previously stated, the leftmost *linear* position of the Anatolian sentence is often occupied by the so-called “connectives”. They have often been compared to interphrasal coordinating “conjunctions” (e.g., by the *Chicago Hittite Dictionary* L-N, 1989, s.v. *nu*; Hoffner and Melchert 2008, 390–395). Non-adversative coordinating conjunctions, however, have the primary function of combining phrases (words, constituents or entire clauses sharing some categorial features) and merging them into larger phrasal units (cf. Chapter 2, §8; and Chapter 6). This function is not specific of any of the so-called non-enclitic “connectives” of Anatolian: as shown by Hoffner and Melchert (2008, 390–395), they mark logical or temporal progression, but they are able to “link” both coordinate clauses and clauses that do not lie on the same level of phrasal embedding.

Most of the studies dedicated to Anatolian “connectives” have concentrated on the specific case in which they occur in a main clause (this will be indicated in this case with the symbol S), linking it to its own preposed subordinate (indicated here by S’) or to another hierarchically coordinated clause (be it a main clause or a subordinate clause):

[1a]      [[S’ ... [VP<sub>1</sub>]] [*nu* [S ... [VP<sub>2</sub>]]]]

[1b]      [[S<sub>1</sub> ... [VP<sub>1</sub>]] [*nu* [S<sub>2</sub> ... [VP<sub>2</sub>]]]]

When these kinds of sentences are translated by the scholars in modern European languages, the connective *nu* of Hittite (taken here as an example for the whole category) is not translated at all, and it certainly cannot be translated with an “and” in pattern [1a] (if translated at all, the word of choice must be an adverbial, e.g. “then”, and this is a crucial restriction). Examples of these two forms of architecture are highly frequent, as both of them simply represent one of the standard regular ways to build interphrasal structures in Hittite (the other option being the asyndetic connection, in which the “connective” does not appear, as there is no temporal or logical progression between the two linked clauses). The constructions [1a] and [1b] can be found from the Old-Hittite phase (cf. in general Luraghi 1990 on Old Hittite syntax; also

Luraghi 1998 for a study on the Hittite “connectives”) down to the later phases of the language, while their high prevalence within the corpus does not require metrics being assigned for the purpose of the present work. Consider the following examples from older and later phases of the Hittite language (cf. also Hoffner and Melchert 2008, 391ff.):

- [2] *takku* LÚ.U<sub>19</sub>.LU-*as*      *EL-LAM-as*      *QASSU*  
 if    man.GEN.SG                    free.GEN.SG            arm.his  
*nasma*    ĞİR-ŠU *kuiski*                                    *tuwarnizzi*  
 or    leg.his    someone.NOM                    break.PRS3SG  
*nu*    -*sse*    20 ĞÍN    KÙ.BABBAR *pai*  
 INTR    he.D/L    20 shekel silver                    give.PRS3SG  
 “If someone breaks the arm or the leg of a free man, he shall pay him 20 shekels of silver”.<sup>202</sup>
- [3] *nu*    -*kan* *kuiskuis*                                    URU-*as*    *anda* SixSÁ-*ri*  
 INTR    PTCL    whichever.NOM city.NOM.SG inside show.MP.PRS3SG  
*nu*    *apus*                                    -*pat*    *dai*  
 INTR    that.ACC.PL                                    FOC    take.PRS3SG  
 “Whatever town(s) will be indicated, he shall take them indeed”.<sup>203</sup>
- [4] *uilnas*    ÉRIN<sup>MES</sup>-*an*    *tessummiuss-a* *takna*    *hariemi*  
 clay.GEN.SG soldier.ACC.SG *t*.ACC.PL            earth.D/LSG bury.PRS1SG  
*t*    -*us*                                    *tarmaemi*  
 INTR    they.ACC fasten.PRS1SG  
 “I bury the clay soldier and the *t*.-cups in the earth and I fasten them.”<sup>204</sup>
- [5] *nu*    -*ssan*    *apedas*                                    *kuwatqa*  
 INTR    PTCL    that.GEN.PL                                    something.A/I  
*antuhsas*                                    *para*    *uskisi*  
 man.GEN.PL                                    before    look.PRS2SG  
*nu*    *kissan*    *mematti*  
 INTR    so                                    speak.PRS2SG  
 “For some reason, you look past those men, and you speak as follows

<sup>202</sup> Old Hittite KBo 6, 2 i 20f.; Hoffner 1997. Text: *ták-ku* LÚ.U<sub>19</sub>.LU-aš *EL-LAM-aš QA-AS-SU* na-aš-ma ĞİR-ŠU ku-iš-ki tu-wa-a[rnizzi].

<sup>203</sup> Late Hittite (from an older original) KBo 6, 4 i 12f.; Hoffner 1997. Text: *nu-kan ku-iš(-)ku-iš URU-aš an-da SIXSÁ-ri*.

<sup>204</sup> Old Hittite KBo 17, 1+ iii 8f.; Otten and Souček 1969. Text: *ú-il-na-aš ÉRIN<sup>MES</sup>-an te-eš-šu-um-mi-uš-ša ta-ak-na-a ha-ri-e-mi*.

On the other hand, there are also quite a few cases in which “connectives” occur between two subordinate clauses, which are coordinated with each other:

- [6] [S’<sub>1</sub> ... [VP<sub>1</sub>]] [S’<sub>2</sub> *nu* ... [VP<sub>2</sub>]] [S<sub>3</sub> *nu* ... [VP<sub>3</sub>]]  
 [7] *takku* *İR-as* *huwai* *n* *-as*  
 if slave.NOM run.PRS3SG INTR he.NOM  
*A-NA KUR Luwiya paizzi*  
 Luwiya.ALL(?) go.PRS3SG  
 “If a slave escapes and heads to the land of Luwiya...”<sup>206</sup>

The structure in [2] is a case of clause-linkage which cannot be described as “coordination”. Meanwhile, the patterns in [3] and [6] correspond to a syntactically standard definition of “coordination” that one uses, for instance, when describing the grammar of modern English, German or Italian. Nevertheless, [2] is not the only case that features a non-coordinating “connective”. In fact, these three patterns ([2], [3] and [6]) do not exhaust all configurations involving an Anatolian “connective”. A fourth case is attested in both the Hittite [8a] and the Luwian [8b] corpora:

- [8a] ... [*nu* [S’ ... [VP<sub>1</sub>]]] [*nu* [S ... [VP<sub>2</sub>]]]  
 [8b] ... [*a* [S’ ... [VP<sub>1</sub>]]] [*a* [S ... [VP<sub>2</sub>]]]

This case has not received a great deal of attention. In general, it is regarded as a straightforward case in which the first “connector”, even though it occurs within the apparent boundaries of the subordinate sentence, links the whole period to a previous sentence. This is highly consistent with the semantic and informational pattern of the examples in which the constructions actually occur. Two Luwian examples should be taken into consideration:

<sup>205</sup> Late Hittite KBo 5, 3 iii 27f.; Friedrich 1926, 95ff. Text: *nu-uš-ša-an a-pé-e-da-aš ku-wa-at-qa an-tu-uh-ša-aš pa-ra-a uš-ki-ši nu ki-iš-ša-an me-ma-at-ti*.  
<sup>206</sup> Old Hittite KBo 6, 2 i 51; Hoffner 1997. Text: *ta-ak-ku İR-aš hu-wa-i na-aš A-NA KUR Lu-ú-i-ya pa-iz-zi*.

- [9] *a* -wa *kummaya* DEUS.DOMUS-sa *kuman tamaha*  
 INTR QUOT holy.N/A.PL temple.N/A(?).PL(?) when build.PST1SG  
 ★*a* -wa -mu -tta *zanzi*  
 INTR QUOT I.D/L PTCL this.NOM.PL  
*kutassarinzi appan awinta*  
 orthostat.NOM.PL afterwards come.PST3PL  
 “and (*a-*), when (*kuman*) I built (this) holy temple/(this) temple’s  
 holies, then (*a-*) afterwards the orthostats came to me.”<sup>207</sup>
- [10] ★*apan* -pa -wa *zas Tarhunzas tatariya(t)tu*  
 that.ACC.SG *pa* QUOT this.NOM.SG T.NOM curse.IMP3SG  
 ★*a* -wa -as *kuman* ★*asti* *palsati*  
 INTR QUOT he.NOM when be.PRS3SG way.A/I  
*a* -wa *Tarhunzas Kupapas*  
 INTR QUOT Tarhunza.NOM Kubaba.NOM  
*hanta nis manatti*  
 face.N/A.PL not see.PRS3SG  
 “Him may this Tarhunzas curse: when he will be dead,<sup>208</sup> let him not  
 see the faces of Tarhunzas and Kupapa.”<sup>209</sup>

All of these cases, however, have something in common. As particularly highlighted in a study on Hittite by Widmer (2009), they feature some form of *informational* connection that usually preserves the same main topic as in the first sentence, which does not change in the discourse, while the sentence introduced by a connective essentially represents informational *comment* with respect to the main topic. This pattern certainly depends on the fact that connectives mark the semantics of either chronological or logical progression in the discourse. As I will argue, they do not behave as “coordinators” in a phrase-structural

<sup>207</sup> KARKEMIŠ A11a §§14f.; Hawkins 2000, 95ff. Text: a-wa/i PURUS.MI-ia DEUS.DOMUS-sa(?) ku-ma-na AEDIFICARE+MI-ha wa/i-mu-tá-’ | za-zi (SCALPRUM)ku-ta-sa<sub>5</sub>+ra/i-zi | POST-ní || | PES-wa/i-ta.

<sup>208</sup> Abl. *palsati* “from the way(?)”, certainly a way to indicate the condition of the dead.

<sup>209</sup> KARKEMIŠ A2+3 §§22f.; Hawkins 2000, 109ff. Text: | pa-pa-wa/i-’ | za-a-sa (DEUS)TONITRUS-sa (LOQUI)tá-tara/i-ia-tu wa/i-sa-’ | ku-ma-na sa-ti-’ | pa-la-sa-ti-i a-wa/i (DEUS)TONITRUS-sa || (DEUS)ku+AVIS-pa-sa | (“FRONS”)ha-tá |NEG<sub>3</sub>-sa|LITUUS+na-ti-i.

perspective; nevertheless, their function is to define the exact semantics of the relationship between adjoined clauses. Before illustrating the structural representation of the constructs that are headed by a connective, a description of the other elements of the Luwian (and Anatolian) left periphery is certainly in order.

### §3. The clitic chain

The second linear element after the “connective” (or the first fronted element, in case of asyndetic clause seriation) is represented by a string of clitics. Sentence-level clitics are of the utmost importance for the analysis of the main areas of the linear clause-architecture of Anatolian, as they share the accent with any left-prominent element that opens the sentence, thus indicating the possible location of a prosodic boundary between periphery and core. It is highly plausible that the position in which long chains of clitics occurred coincided with a prosodic pause in the utterance, in a fashion similar to the prosodic pause (and shift in intonation) that cross-linguistically follows topicalized elements. When working on a text-language, however, this point is destined to remain speculative.

#### §3.1. Overview

Morphosyntactically and semantically, Luwian clitics can be divided into three classes:

1. Particles *-pa* and *-ha*. They can be compared to some extent to the Hittite *-(m)a* and *-(y)a* respectively (on which see Hoffner and Melchert 2008, 395ff., §§29.24–45). The Luwian *-pa* can only occur at the sentence level (attached to a fronted phrase), and marks contrastivity (either in a Top or in a Foc position), while *-ha* is frequently attached to a clause-internal phrase and can be used, for instance, to merge two coordinated NPs (cf. Chapter 2, §8., on DP/NP coordination). Its original function, however, is in all likelihood that of marking additive focus (closer to English “also” than to a proper coordinator “and”).
2. Local particles *-tta*, *-tar* and *-(V)r* can modify the main predicate on the sentence or VP level, in a similar way to the so-called

*Satzpartikeln* of Hittite (-*an*, -*apa*, -(*a*)*sta*, -*kan*, -*san*).<sup>210</sup> In Luwian, -*tta*, and possibly -*tar*, can also occur clause-internally, attached to a nominal. The exact meaning of the particle -(*V*)*r* is uncertain and may even be non-local (cf. Giusfredi 2014).

3. Clitic pronouns can occur in different cases and map different semantic roles, including subjects (e.g., undergoers, perceivers, but not agents), direct objects (e.g., patients, targets) and indirect objects (e.g., beneficiaries). As outlined in Chapter 1 and discussed in Chapter 3, §2.4. a reflexive-like set of pronouns also exists.

Positionally, the Anatolian clitics can be divided into two further categories: the ones that only occur in the clitic chain hosted by the leftmost accented element, and those that can also be attached to a clause-internal host. No clitic exists that can *only* occur clause-medially; however, since an XP-attached clitic is likely to undergo movement when the XP is also moved, this is not a solid distributional criterion; moreover it cannot be used to attempt any theoretical generalization.

The two criteria for positional and semantic/syntactic behaviour can be used as a pair of coordinates to better organize a taxonomy:

	contrastive/ additive markers	Local particle	Clitic pronoun
Clause initial	-pa, -ha	-tta, -tar, -(V)r <sup>211</sup>	all
Clause medial	(-ha as a DP/NP coordinator)	-tta, -tar(?)	none

Table 13: The Luwian clitic elements

Apparently, clitics that can be hosted by a clause-internal element in Luwian can only be attached to nominals (nouns, NPs, adjectival phrases); or at least there are no certain attestations of clitics that attach to non-peripheral verbs (which is possible, for instance, for the Hittite

<sup>210</sup> On the Hittite sentence level particles, cf. Carruba 1969; Josephson 1972; Boley 1989; Neu 1993; Brosch 2013.

<sup>211</sup> The exact function of -(*V*)*r* is unclear; see Giusfredi (2014) for discussion and reference to the previous literature.

contrastive marker *-(m)a*).

Clause-medial clitics in Luwian include the particle *-ha* (but only as a DP/NP-coordinating conjunction, on which see Chapter 2, §8), and the local particle *-tta*, which, being a local/directional adverbial element, may in some cases be attached to a noun indicating a target or location, in a fashion similar to the adverbials that can select a nominal and build a post-positional phrase (PP).

The only certain examples of the clause-medial *-tta* recognized so far in the corpus are found in the Kizzuwatna Ritual of Zarpiya KUB 9, 31 ii 25f.:

- [11] *pa -tar appa zastanz astummantanz -tta*  
*pa* PTCL back this.D/L.PL gate.D/L.PL PTCL  
*attuwalahiti nis dadduwar*  
 evil.A/1 not stand.MP.PRS2PL  
 “And do not stand again with evil (intentions) against these gates!”<sup>212</sup>

In the superficially similar case in ib. ii 30ff.:

- [12] *urazzas Tiwaz tatinzi massaninzi Eas -ha*  
 big.NOM.SG *T*.NOM father.of.NOM.PL god.NOM.PL *E*.NOM and  
*parnanza -tta kuwatti anda huinaiman lalanti*  
 house.D/L.PL PTCL which.D/L in *h*.N/A.SG take.PRS3PL  
 “Great Tiwaz, Gods of the Father(s) and Ea! In the houses where they take the *a. h.* (... there you should have a banquet)”<sup>213</sup>

*-tta* is not necessarily clause-medial, given that the names of the gods in the left periphery represent a vocative. A similar behaviour can be assumed for *-tar*, but no clause-medial occurrence has been recognized so far.

<sup>212</sup> Starke 1985, 50ff. Text: *pa-a-tar a-ap-pa za-aš-ta-an-za as-tu-um-ma-an-ta-an-za-ta at-tu-wa-la-hi-ti ni-is da-a-ad-du-wa-ar.*

<sup>213</sup> Starke 1985, 50ff. Text: *u-ra-az«-za-aš»<sup>D</sup>UTU-az ta-ti-in-zi DINGIR<sup>MEŠ</sup>-in-zi<sup>DÉ</sup>.A-aš-ha pâr-na-an-za-ta ku-wa-at-ti an-da hu-u-i-na-i-ma-an la-la-an-ti.*

### §3.2. Configuration

Configuration *inside* the clitic chain is complex but extremely regular. As in the case of Hittite, Luwian clitics follow a well-defined pattern, with each one carrying a specific function, with respect to either a left-peripheral phrase or the whole clause. When peripheral, they follow the first tonic element of the clause, which can be the “connective” or a fronted or initial phrase or part of phrase. In the case of phrase fronting (involving more than a single word), sentence-level clitics will *not* be attached to the last linear element of the constituent, but to the first one, breaking the linear integrity of the phrase.

The general pattern of the first phonological phrase hosting clitics in Luwian is the following:

CONN/ HOST	CONTR. / ADD.	QUOT	IO/REFL	OBJ/SB J	PTCL
a-, pa-,  other phonetic head	(-)pa -ha	-wa(r)	-mu, -tu, -mmanz(a) -mi, -ti -(a)nz(a), -mmas	-mu, -ta, -an, -s, ata	-tta, -tar -(V)r

Table 14: The configuration of the Luwian clitic elements

The phonological head is the only non-optional position: provided that at least one clitic exists, a prosodic host must be there. This position can be occupied by a connective, or, in asyndetic series, by a fronted element or by a non-prominent IP-internal element, in case the left peripheral slots for tonic elements are empty. CONTR/ADD represents a single informational marker *-ha* or *-pa* (*-ha* and *-pa* exclude each other; on orthotonic *pa-* and its relationship to clitic *-pa* cf. Chapter 6, §1.2.; as well as Melchert 1993 *s.v.*). QUOT is the direct-speech particle *-wa*.<sup>214</sup> IO is the indirect object, while REFL is the reflexive element

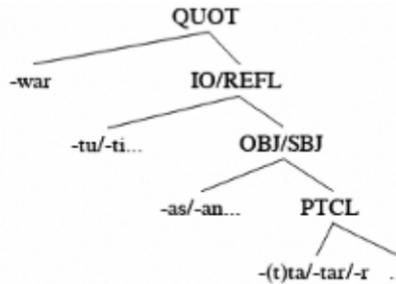
<sup>214</sup> The putative clitic connector *-ku-* of cuneiform Luwian (Melchert 1993 *s.v.*) only occurs before the direct-speech particle *-wa(r)*. It is therefore likely that the connector in fact did not exist, while the *-kwa-* sequence is an

(third-person *-ti* or any reflexive pronoun corresponding to a different person). The first pronominal slot can be followed by another one occupied by a direct object in the accusative (only in the case of transitive constructions) or by a subject in the nominative (they are mutually exclusive because the clitic subject is only possible in intransitive constructions). PTCL is any of the local particles acting on the sentence level (no clear cases of multiple particles are attested in the corpus).

Some clitics are extracted from clause-internal positions: the pronouns from the argument slot they belong to (cf. Chapter 3, §2.2.; and Chapter 4, §§2–3.) and the local particles, possibly, from a VP-internal adverbial position. Other clitics are probably generated in a high peripheral slot: the direct-speech particle probably acts on the interface level between sentence and discourse. Meanwhile, as clitics *-ha* and *-pa* are always attached to a fronted constituent, they may occupy the same position, possibly undergoing fronting along with the element they are attached to. This analysis is consistent with the idea that *-ha* is not a proper connector of clauses, but rather a marker of additivity, supported also by the fact that *-pa* and *-ha* seem to be mutually exclusive, as are the semantic traits of informational contrast/selection vs. addition. Without attempting an interpretive syntactic labelling of the single positions, clitics may be mapped onto a binary-branched syntagmatic tree, which represents a portion of the clause that is hierarchically higher than those of Top and Foc.<sup>215</sup>

allomorphe for *-wa(r)* or a completely different particle. Cf. however also Boley 2004, 100f.

<sup>215</sup> In the present account, the analysis of clitics and prosodic inversion as outlined by Halpern 1995 is subsumed; a distinction between CP clitics and IP clitics, however, can hardly be attempted. Elements that can occur both in the CP and inside DP/NPs, such as the coordinating *-ha* and the particle *-(t)ta*, have different functions in the different positions.



The resulting chain either attaches to an initial connective or undergoes prosodic inversion, resulting in the consistent linear order “first word” > clitics. The prosodic nature of the inversion perfectly predicts that, in the case of phrase movement, the clitics land between the first and the second element of the fronted phrase. Since all the elements that belong to a position higher than the first topic undergo prosodic inversion, the second felicitous prediction of this model is that the highest projection of the periphery will be the first one within the standard clause architecture of Luwian (and Anatolian).

In a few late texts from the Iron Age hieroglyphic corpus, the “connective” *a-* may be absent, while the clitic chain can simply begin with the following element, the quotative particle *-wa(r)*. This fact depends on a simplification of the scribal praxis usually called “initial-*a*-final” (cf. Chapter 1, §3.5.), so that in texts of the 8<sup>th</sup> century the initial *a-* was simply occasionally omitted. This phenomenon probably has no linguistic significance, as discussed by Melchert from a merely phonological perspective (2010). Alternatively, taking into account the syntactic perspective as well, a grammaticalization of the QUOT element *wa(r)-* into a “connective”-like, prosodically or inherently accented, first-position prosodic head may have taken place, perhaps after contact with the West Semitic languages, which feature a similarly sounding conjunction (e.g. the Phoenician and Aramaic *w-*).<sup>216</sup> In either

<sup>216</sup> Throughout this book, the late Luwian sentences beginning with *wa-* are glossed as featuring an omitted initial *a-*, that is put in round brackets. This is, however, a merely conventional representation: the presence or absence of *a-* and the possible grammaticalization of *wa-* into a connective is, at

case, this problem has no significant impact on the theory under construction: either the connective was just graphically omitted, or it was replaced by a new connective *wa(r)-* in later texts, with the structural features of the left periphery being generally unaltered.

### §3.3. Redundancy, reduplication and doubling

Apart from the mutual exclusivity of the clitic subject and clitic object, sentences usually do not feature both a dative clitic and a reflexive pronoun, although both can occur along with other pronouns, since the semantic nuances of dative and reflexive pronouns include the expression of advantage, the marking of the beneficiary, the marking of possession and the subject-aligned marking of transitive-reflexive constructions. An example of a reflexive pronoun used to express possession with a transitive predication is represented by KUB 32, 8+ iii 11f.:

- [13] *harmahati -ti -an -tta tappanin latta*<sup>217</sup>  
 head.A/I REFL he.ACC PTCL hair.ACC take.pst3sg  
 “From his own head he took it, the hair(?)”

It is worth comparing the patterns of clitics in Luwian with the patterns of clitics in Hittite, as they were recently schematized by Widmer (2009).<sup>218</sup> The prosodic head in the leftmost position is omitted for the sake of simplicity.

Luw.	CONTR/ ADD	QUOT	IO/REFL		OBJ/SBJ		PTCL
Hitt.	CONTR/ ADD	QUOT	Plural IO/OBJ	3 <sup>rd</sup> person SBJ/OBJ	Singular IO/OBJ	REFL (-za-)	PTCL

Table 15: The Luwian and Hittite clitic positions

present, an undecidable issue. Further studies are required in order to shed light on this phenomenon.

<sup>217</sup> Text: har-ma-a-ha-ti-ti-a-an-ta tap-pa-a-ni-in (12) la-a-at-ta.

<sup>218</sup> Cf. also Widmer 2012, Agbayani and Golston 2012, on the order of anaphoric pronouns in Anatolian.

An important difference emerges from the comparison between Luwian and Hittite in the pattern of the pronominal elements within the clitic chain. Luwian does not assign a different position to non-subjects depending on person and number, while Hittite does. Furthermore, the Luwian clitic reflexives do not occupy the second-to-last position to the right as the Hittite *-za*; rather, they occupy a position that precedes the SBJ/OBJ pronominal slot, in the same way as dative indirect objects. This may indicate a closer similarity (which is very likely to be etymological) between the dative case and the reflexive marker in Luwian, which could be related to the fact that Luwian was more archaic than Hittite – assuming that a grammaticalization distancing *-za* from the pronominal set could also have altered its collocation within the configuration of clitics (but cf. Hajnal and Zipser 2017 on the diachronic development of the clitic chain).

Sentence [13] also demonstrates a phenomenon that is common to Luwian and the later phases of Hittite: the presence of a clitic pronoun (the object *-an*) co-indexed with a nominal argument (*tappanin*), which is not deleted from the core predication. This kind of argument reduplication can invite different explanations in the syntax of different languages. In the modern Romance languages, these kinds of phenomena occur in informationally marked constructions, as in the following examples from Italian and French:

- [14]     *L'ho vista, la casa!*  
          “I’ve seen it, the house!”
- [15]     *Je l’ai vue, la terrible image du désespoir!*  
          “I have seen it, the terrible image of desperation!”

These constructions involve the so-called *clitic doubling*, which, in Romance, frequently co-occurs with informational markedness, and requires the doubled clitic to be referentially co-indexed with the marked constituent. The Luwian clitic doubling is also attested in marked constructions, as well as exhibits some important differences.

First of all, it is necessary to provide an appropriate definition: Luwian clitic doubling should not be confused with *clitic reduplication*, which is the pattern attested in Hittite. Reduplication is the repetition of a clitic, which occurs twice in two different positions of the chain, while doubling is the redundant instantiation of a clitic for an argument that also occurs orthotonically. In Hittite, reduplication almost certainly

depended on contact with Luwian (Rieken 2006; Yakubovich 2010). The sequence:

[16a] [INTR *n*] [OBJ *an*] [REFL *za*] [OBJ *an*]

occurs in Hittite later texts, instead of the “regular” pattern:

[16b] [INTR *n*] [OBJ *an*] [REFL *za*]

This is a case of syntactic interference with Luwian, in which the direct object should have followed the reflexive element, instead of preceding it:

[17] [INTR *a*] [REFL *ti*] [OBJ *an*]

The result was a redundant overmarking of the clitic, which emerged both in the Hittite and in the Luwian regular position.

Of course, such phenomena cannot be attested in Luwian (the model-language of a Hittite syntactic change). On the other hand, some Luwian occurrences feature proper *clitic doubling*. A first case is represented by a doubtful, syntactically complex and obscure passage within the ASSUR Letter F+G, §9:

[18] *kwis*                      *-wa*        *-as*            *anzis*        *haturas*  
 who.NOM.SG                QUOT    he/it.NOM our.NOM.SG writing(?).NOM.SG  
 “What(?) is it, our writing(?)?”<sup>219</sup>

The translation by Hawkins (2000: “What is it, our writing?”) is admittedly tentative, while the exact meaning is completely obscure, although the context points to a discussion regarding previous epistolary correspondence and commercial orders, which have been placed by the author of the letter and were neglected by the receiver.<sup>220</sup> Regardless of the position of the *wh*-element *kwa/i-*, the *-as* third-person subject pronoun is certainly co-indexed with the appositional DP/NP *anzis*

<sup>219</sup> Hawkins 2000, 535ff. Text: | *kwa/i-sà-'-wa/i-sa-'* | *a-zi-sa* | *ha-tu-ra+a-sa*.

<sup>220</sup> Cf. Giusfredi (2010), 208ff., for a presentation and discussion of the ASSUR Letters, and for references to the previous studies and editions.

*haturas* at the end of the clause.

This phenomenon is entirely different from the *reduplication* that occurs in Hittite; it also has relevance with respect to the interaction of the syntactic and informational levels of patterning. In general, it involves the cataphoric use of a clitic pronoun, which is co-indexed with an orthotonic nominal that is still present in the core predication.<sup>221</sup> In Hittite, it is rare, and more frequent in texts translated from languages with a very different clause-architecture, e.g. from Hattian or Hurrian, probably in order to overmark difficult syntactic relationships (cf. Rizza 2007, in particular 93–173).

Moving back to the Luwian examples of clitic doubling, they are not very common either, and in the cuneiform corpus they might correlate with translation texts, if one assumed a Hurrian or mixed origin for some Kizzuwatna rituals. One may quote the following example (KUB 32, 9+ i 7, integrated with parallels KUB 32, 9+ iii 9 and KUB 13, 262:5), in which the order of phrases is non-canonical as well, such that the doubling of the clitic, once again, is not the only syntactic phenomenon that occurs:

<sup>221</sup> Another case not to be confused with clitic doubling is the scheme *kath'olon kai meros*, which involves a double accusative, for instance in a KARKEMIŠ A7, §3, is a well preserved hieroglyphic clause containing apparent clitic doubling. The text dates back to the eighth century, and describes the act of a regent-prince who raised the son of his dead sovereign. The situation is introduced by the metaphor of taking the child's hand and raising it.

[SBJ <i>amu</i> ]	[ <i>pa wa</i> ]	[OBJ <i>an</i> ]	[ADV <i>zati</i> ]
I	(clitics)	him	here
[OBJ <i>isatarin</i> ]	[V <i>laha</i> ]		
the hand	took		

“But here I took his hand (lit. I took him the hand)”

This construction co-occurs with no general alteration in the order of the constituents of the clause. The subject occurs in a contrastively marked Top position, and acts as the orthotonic phonetic head of the clitic chain, but a general S-O-V order is respected. The apparent repetition of the object is not a case of clitic doubling: the pronoun *-an* is not co-indexed with the NP-object *isatarin*, but it is referred to the child: “to take someone the hand” > “to take someone's hand”.

- [19]    *nis*        *-an*        *hapiti*                    *malhassassin*    *naniyan*  
not        he.ACC    bind.PRS3SG        ritual.of.ACC.SG    lord.ACC.SG  
*adduwalis*        *lalis*  
evil.NOM.SG        tongue.NOM.SG  
“May the evil word not catch the lord of the ritual!”<sup>222</sup>

Here, the prohibitive construction, featuring the fronting of a predicate (*nis hapiti*, with the insertion of the clitic), also produces the apparent dislocation of the subject to the evacuated right periphery, generating a V-O-S surface order of constituents. It is possible that the redundant insertion of the clitic object *-an* is due to the fact that after the predicate fronting the orthotonic object nominal (*malhassassin naniyan*) lands in a non-canonical postverbal position. However, such a factor may at most have had a limited influence on the choice of inserting a doubled clitic because this is the only example that was located in the corpus in which the fronting of a predicate and a redundant object clitic pronoun co-occur.

Further cases of marked clause-architectures featuring clear cases of clitic doubling in Cuneiform Luwian include KUB 35, 48+ ii 15 (with parallel KUB 35, 45 ii 21ff.), in which the order of constituents is even more scattered, because the constituent which is co-indexed with the redundant clitic is superficially right-dislocated and follows not just the VP, but also a fronted (relative pronoun) subject and a fronted predicate.

- [20]    *kuis*                    *-an*        *ippatarrissatta*  
who.NOM.SG        he.ACC    distract.PST3SG  
*malhassassin*        *naniyan*  
ritual.of.ACC.SG    lord.ACC.SG  
“Who(ever) distracted him, the ritual lord...”<sup>223</sup>

In some cases, the redundant clitic can be referred to an element that is not left-dislocated, in a construction that is quite different from proper clitic-doubling. Sentence [13] featured a fronted ablative in the

<sup>222</sup> Starke 1985, 87ff. Text: [(ni-i-ša-an ha-pí-ti ma-al-ha-aš-š)]a-aš-ši-in EN-an ad-du-wa-li-iš EME-i[š].

<sup>223</sup> Starke 1985, 155ff. Text: [(ku-i-ša-a)n i-ip-pa-tar-ri-eš-ša«-at»-ta SISKUR<sup>HL.A</sup>-ši-in EN-an.

discourse-initial position, which made the clause architecture non-canonical, in a fashion that is not clearly related to the syntactic pattern involving the doubled clitic. The following passage provides the context of occurrence of the example (KUB 32, 9 iii 8ff.), which is part of a ritual chant or conjuration:

- [21]     *harmahati -ti -an -tta tappanin latta*  
 head.A/I   REFL   he.ACC   PTCL hair.ACC.SG   take.PST3SG  
*zanda dupaimmin issarin*  
 down(?)   hit.PTCP.ACC.SG   hand.ACC.SG  
*zanda dupaimmin lalin*  
 down(?)   hit.PTCP.ACC.SG   tongue.ACC.SG  
*lalpin -ti -tta ladda*  
 eyelid.ACC.SG   REFL   PTCL   take.PST3SG  
*kuwannin -ti -tta ladda*  
 eyebrow.ACC.SG   REFL   PTCL   take.PST3SG  
 “From his own head he took it, the hair(?)– down (with?) the wounded(?) hand, down (with?) the wounded(?) tongue –, (and) his own eyelid, he took, (and) his own eyebrow, he took.”<sup>224</sup>

Regardless of the problematic and admittedly obscure refrain *zanda dupaimmin issarin*, *zanda dupaimmin lalin*, it is reasonable to assume that the fronting of the ablative *harmahati* “from the head” introduces the main topic (or scene-setting, or frame under different metalinguistic framesets) of the sentences that follow. The text proceeds by listing other parts that are removed from the “head”. If the interpretation of the passage, given by Melchert (1988) and accepted by Goedegebuure (2010), is correct, “hair” (*tappani-*), “eyelash” (*lalpi-*) and “eyebrow” (*kuwannani-*) are all removed from the “head” during the performance of the ritual. Accordingly, the word *harmaha/i-* is moved to the leftmost functional position.

Another rather interesting and example of clitic redundancy without co-indexing with a left-dislocated element is provided by the eighth century inscription KARKEMIŠ A15b, §17, in which the redundant clitic is co-

<sup>224</sup> Cf. example [13] above. Text: har-ma-a-ha-ti-ti-a-an-ta tap-pa-a-ni-in la-a-at-ta za-an-da du-ú-pa-i-mi-in iš-ša-ri-in za-an-da du-ú-pa-i-mi-in EME-in la-al-pi-i-in-ti-it-ta la-a-ad-da ku-wa-an-na-ni-in-ti-it-ta la-a-ad-da.

indexed with a dative nominal (which maps a beneficiary role, which, in this specific case, is best rendered with an English genitive):

- [22] *karmarattahi-sa -pa -wa mmanz amianz*  
 fame(?).N/A.SG *pa* QUOT they.D/L my.D/L.PL  
*naniyanz Astiruwas nimuwanza arha iarahha*  
 lord.of.D/L.PL A.GEN son.D/L.PL away extend.PST3SG  
 “I extended the fame(?) of them, of the children of my lord  
 Astiruwas.”<sup>225</sup>

Once again, the general clause-architecture is non-canonical. Namely, the object *karmarattahisa* is fronted and located in the leftmost position; the elements *-mmanz* is referred to are probably to be analysed as an apposition to the pronoun rather than a proper IP-internal DP/NP.<sup>226</sup>

### §3.4. Correlation between cliticization and informational markedness

In general, a *correlation* between non-canonical word order (due to the presence of marked information) and proper clitic doubling seems to exist. This is far from unexpected. Cross-linguistic evidence from the Indo-European languages makes it clear that the use of clitics permits the instantiation of phoric elements that results in non-canonical orders of words and constituents inside the clause. Consider again the examples [14] and [15] above: the leftbound movement of a topicalized element or a contrastive focal element in languages such as Italian and French also requires a form of clitic redundancy, involving, in the examples presented above, what can be structurally defined by the label of “right dislocation”.<sup>227</sup>

<sup>225</sup> KARKEMIŠ A15b, §17; Hawkins 2000, 131f. Text: | (“CUBITUM”)ka+ra/i-mara/i-ta-hi-sà-pa-wa/i-ma-za-ta á-mi-ia-za-’ | (DOMINUS)na-ni-ia-za <sup>1</sup>á-sa-ti-ru-wa/i-sá | INFANS-ni-ia-za ARHA (“LONGUS”)ia+ra/i-i-ha.

<sup>226</sup> Nevertheless, it is sufficiently clear that the author of the text, King Katuwas, was discussing the way he glorified his younger(?) brothers. The fronted word, *karmarattahisa*, occurs only here in the text and is therefore a good candidate for the role of new-topic; cf. the edition by Hawkins, 2000, 131ff.

<sup>227</sup> On the problem of Italian right-dislocation cf. Samek-Lodovici 2006, with reference to previous literature.

In Luwian, all the occurrences of a doubled clitic pronoun co-occur with some kind of informationally marked pattern. In [20], the ablative *harmaha/i-* is fronted, while the redundant clitic is referred to a different constituent, i.e. the direct object *tappanin*. In [20], the fronted element is a negative *nis*, while the pronoun again refers to the direct object (in this case, *malhassassin naniyan*). These constructions cannot be immediately compared with the French and Italian examples mentioned above, as there are at least *two* different syntactic constituents that receive markedness: the fronted one and the one that is somehow enhanced by the insertion of the pleonastic clitic.

### §3.5. Position of the sentential clitics and origin of extraction

The sentential clitics of Anatolian regularly land in a left-peripheral position, with the sole exception of those that belong within a specific clause-internal phrase (see §3.1. above). They can be classified as both *syntactic* and *phonological* clitics: their position is dictated by an interplay of prosodic and syntactic strong features. From the perspective of prosody, being enclitic they all land after the first orthotonic element of the sentence. Syntactically, they are extracted from different areas of the clause and, being anaphoric with respect to previous constituents, are raised to a CP-internal position in order to check features at the interface of the discourse-level.

Pronouns are extracted according to specific rules from the locus of generation of the arguments or of the other nominals – for core arguments, Garrett’s rule applies, while extraction is possible for VP-internal complements, but not for the transitive subject that is generated in a different structural position. Meanwhile, adverbial clitics, such as the local particles *-tta* and *-tar*, semantically match the functions of verbal modifiers: very likely, they can be well compared to “low” VP level adverbials in Potsdam’s hierarchy (1989), where Anatolian locative/directional “preverbs” (e.g., *annan*, *sarra*, etc.) are also licensed by the verbal head. It is worth noting that in both Luwian and Hittite the sentence particles appear to be local elements (at least as far as the original meaning is concerned). Still, their use as actionality markers in Hittite has been positively identified,<sup>228</sup> which can be regarded as a

<sup>228</sup> In particular, on the use of *-kan* as a marker of telicity, see Cotticelli-Kurras 2014.

consequence of the semantic contiguity of the dimension of the aspectual achievement and the spatial representation of predicate action. Regarding the influence of the Luwian “local” particles on the actuality of the predicate, the examples are limited in number and insufficient for us to attempt a complete theory. However, in a few examples, it is evident that the Luwian *-tta*, just like Hittite *-kan*, does not only occur with motion verbs, as it may add a trait of telicity to the predicate action.<sup>229</sup> For instance, it accompanies the verb *arha wallai-*, “to smash”, in KARKEMIŠ A11a §25:

[23]     *nipa*     *-wa*     *-tta*     *kwis*     *amanza*  
          or     QUOT     PTCL     who.NOM.SG     my.N/A.SG  
          *alamanza*     *arha*     MALLEUS-*lai*  
          name.N/A.SG     away     smash.PRS3SG  
          “...or who(ever) completely destroys my name”<sup>230</sup>

and this construction is similar to the construction *-kan arha harnink-* in Hittite and to other cases in which *-kan* intensifies the semantics of a verb of hostility by adding a telic/terminative nuance (cf. Hoffner and Melchert 2008, 372). In these cases, it is difficult to evaluate whether the corresponding adverbial position is that of a VP-adverbial or that of a sentence-adverbial (higher in the hierarchic structure of the clause and referred to the inflected phrase) in Potsdam’s hierarchy (1989).

#### §4. Periphery and clause

So far, the leftmost elements of the majority of the Luwian sentences appear to be (1) the first prosodically or inherently accented word (in several cases a “connective”); (2) a chain of enclitic elements, which are attached to it; and (3) possibly other constituents that occur in the lower topic of focus positions above the upper edge of the core clause. This also appears to match the general situation of Hittite, although, since

<sup>229</sup> For a discussion on the main functions of Luwian *-ta*, cf. Giusfredi 2014; Brosch 2014, 137.

<sup>230</sup> Hawkins 2000, 96ff. Text: | NEG<sub>2</sub>-pa-wa/i-tá á-ma-za á-lá/i-ma-za *ARHA* MALLEUS-i.

Hittite is a large corpus language, which requires a dedicated analysis, not all the details of the present study should be immediately extended to it.

#### §4.1. Elements of the periphery

The first accented word of the Luwian sentence prosodically hosts the clitics, and can either be a “connective” or a (part of a) different initial constituent. First of all, in order to investigate the leftmost area of the sentence, it should be considered whether or not a given part of speech is attested in left prominent position (see §4.2., below, for examples). Besides the “connectives”, the parts of speech that can certainly occur in the leftmost slot of the sentence are:

1. nominals:
  - a. proper nominals;
  - b. orthotonic personal or demonstrative pronouns;
2. finite verbs:
  - a. finite indicative forms (very unfrequently);
  - b. finite imperative forms (imperatives in Luwian do not land in a peripheral position due to non-informational movement).
3. adverbials:
  - a. fronted VP-level adverbs and preverbs, including negation;
  - b. sentence level adverbs.
4. subordinators: since the Luwian ones do not regularly emerge as leftmost elements, with some of them, e.g., the proper *wh*-elements, usually remaining *in situ*, their occasional collocation in the leftmost slot can sometimes be analysed in terms of informational prominence.

Fronting, in Luwian, does not seem to be motivated by non-informational syntactic movements: evidence for fronting in interrogative, negative and imperative constructions is sparse, while recent studies on relativization have successfully challenged the hypothesis of the Anatolian *wh*-movement (Huggard 2011; 2015). An apparent exception is the position of the Hittite subordinator *takku*,

which always emerges in the left prominent position;<sup>231</sup> Luwian subordinators, on the other hand, are not necessarily bound to a fixed absolute initial slot. This means that, in Luwian (and possibly more generally in Anatolian) the so-called “connectives” represent the only category of part-of-speech that, when present, *must* occur in the leftmost slot of the unmarked linear sentence.

Informational fronting generally depends on alterations of the discourse-configuration of the sentences. In the generative cartographic descriptions of syntax, the functionally active left periphery which is crosslinguistically attested has been described in several different models. The common ground is represented by the assignment of the categories of *topic* and *focus* to functional projections within the CP-layer. By maintaining that an extension of a general model to a specific language should only follow the assessment of the available data, it is now by all means necessary to discuss in more detail how the labels “Focus Phrase” (FocP) and “Topic Phrase” (TopP) should be included in the description of the syntactic structure of Luwian (and Anatolian).

#### §4.2. Topic and focus and the peripheral categories

The data regarding the apparent structure of the Luwian clause and left periphery, which have been introduced so far and compared with the corresponding data about Hittite, describe a situation that should be explained using a model that accounts for the language-specific realization of the linear sentence in Anatolian. Intuitively, the clause proper consists of the major sentence constituents, which make up the unmarked configuration of the sentence. In Anatolian, the surface order of the major constituents is evidently S-O-V. This tells us that the relative orders [O-S] and [V-XP] must be considered marked in one way or another. In general, there is consensus about the fact that the Anatolian languages, and Luwian and Hittite in particular (as they are much more represented than the other idioms of the family), featured *some degree* of topic prominence (which, however, does not exclude subject prominence, as it would be generally expected after the slightly outdated definition by Li and Thompson 1981). This feature is typical of

<sup>231</sup> Still, even *takku* conditional clauses may have matched a correlative structure at the level of the deep semantic/syntax interface, as shown by the felicitous analysis by Huggard 2015.

languages that have a functional configuration of the informational pattern, assigning a left prominent position to the topical elements of the sentence (and following a hierarchy of topicality, decreasing with the linear order from the left to the right). Even the studies which have rejected, in part or in full, the idea of the configurationality of the Anatolian languages, have emphasized that the leftmost position within the linear clause is dedicated to prominent information (on Hieroglyphic Luwian, cf., e.g., Bauer 2014, who consistently analyses the leftmost modifier or head as semantically and informationally “salient”). More generally, even outside of the generative framework(s), at the level of clause-architecture informational prominence has been consistently described in the literature in terms of *topicality* and *focus*.

Topicalization is a well-known process, which, if not universally at least in several Indo-European languages, produces the leftbound movement of a constituent (or a part of a constituent) in order to place the element representing the main topic of the sentence in a marked position. As such, it is not a synonym of *fronting*, which simply describes the structural movement without characterizing it in terms of functional operations (in other words, all topicalizations involve fronting, but not every fronting implies topicalization). When an element undergoes topicalization, it has topic-scope over the elements that follow. A *topic* is generally defined as “what the sentence is talking about” and, as such, is traditionally opposed to the *comment*, “what is said about the topic”. Thus, the topic is not a synonym of “subject” – even though the subject is certainly a prototypical candidate for informational topicality in several languages (it must not be confused with a synonym of “nominative”, which is a morpho-syntactic categorization of a mark that prototypically, but not necessarily, encodes the semantic first actant of a predication in the Indo-European non-ergative languages, such as Luwian<sup>232</sup>).

In the cartographic approaches to syntactic description, the landing site of a topicalized constituent is usually called the Topic Phrase (TopP); different models of movement describe a large variety of phenomena

<sup>232</sup> I employ the very general label “actant” to indicate the participant to the predication on the pre-semiotic level of semantics, borrowing it from Tesnière (1959, 115), as opposed to the semiotic labels of “syntactic argument” and “complement”. All labels, however, refer to predicate valency.

that target the slot, some of which would require elaborate discussion to be made compatible with the very definition of topic.<sup>233</sup>

Defining *focus* is, indeed, a less trivial task. In the first studies dedicated to the syntactic structure of focal elements, focus was first identified as a contrastively marked element (e.g., Rizzi 1997; 2013). Halliday (1967), however, already distinguished different types of foci, which all share the common feature of marking the prominence of new, unexpected or counterintuitive information with respect to the disposition and expectations of the receiver of a message; more recently, a taxonomy of foci was also proposed by Bianchi, Bocci and Cruschina (2013). In the field of Anatolian syntax, a fine distinction of the attested types of foci was offered by Goedegebuure (2013), who distinguished between different forms that would occur in different clause configurations, with counterexpectational focus being hierarchically lower in the tree than additive and informational types.

Given these functional definitions, it is immediately clear that the two labels topic and focus do not emerge as a functional dichotomy: contrastive information can coincide with the topic of a sentence (it is always so, for instance, in the case of what in literature has been labelled a “contrastive topic”),<sup>234</sup> as can counterexpectational information. Therefore, even by applying a rigorous metalinguistic taxonomy, there would be no compelling reason to exclude the possibility that the focal and the topical elements of a clause may coincide.

Solving this issue is no trivial task, and it cannot be done in this work. However, in order to provide as much information as possible on the different pattern, I will rather separate the term *focus* (which indicates additional information about the topic) from the concepts of contrastivity and additivity, assuming that topic and focus regard informational hierarchy, while the latter labels refer to the relationship between informationally marked elements, so that an element both in

<sup>233</sup> While a prototypical topic is certainly a nominal argument, adverbials can be topicalized and, in some cases, even inflected verbs. The strategies for verb-topicalization and their reflexes on the overt morphology vary language-specifically.

<sup>234</sup> For a recent analysis of contrastivity, focus and topic cf. Neeleman and Vermeulen, eds., 2013. In his analysis, topicality and focus represent a coordinates system, with each one being either contrastive or non-contrastive.

topic and in focus position may be characterised by contrastivity (which in Luwian is marked by the clitic *-pa*) or additivity (marked, in Luwian, by *-ha*).

#### §4.3. The apparent problem of multiple foci

Valid syntactic frameworks, even if they are different and compete with each other, should be roughly equivalent to each other. For instance, if one considers the definition of “subject”, a generativist model and the more traditional approaches would use it to refer to the same elements; when a more “airy” framework, e.g. some types of construction grammar, uses the label in an entirely different way (for instance to indicate any semantic agent, perceiver and most undergoers, independently from the syntactic encoding), the incompatibility of the competing theories is generally a matter of metalanguage. A similar metalinguistic problem occurs with the way the label “focus” has been employed in the description of Anatolian phrase structure. In a generative cartographic approach, the position of left-peripheral focus should be unique and uniterable, as opposed to the positions for topical elements, which can be hierarchically nested (Rizzi 1997). On the other hand, the most detailed and extensive works on focus in Hittite have been authored by Goedegebuure (2013, 2014), who does not work with a generative approach, but provides a complex taxonomy of foci, which would be different in type and occupy different positions in the Hittite clause.<sup>235</sup> As a matter of fact, however, the problem of multiple foci is indeed metalinguistic, and, in part, only apparent. As already argued, some types of focus may not belong to the left-periphery; instead, they are only marked by intonation.

#### §4.4. The left-peripheral area

As previously stated, the left-peripheral area of the clause corresponds to a set of slots that crosslinguistically host elements and operators that regularly outscope the lower layers or phrases or parts of phrases that are fronted for informational reasons.

The hierarchy of topics has been recently explored crosslinguistically by several contributions (collected, in particular, in Benincà and Munaro,

<sup>235</sup> For a taxonomy of different foci and on their structural behaviour cf. also Kučerová and Neeleman (eds.) 2012.

eds., 2011, with extensive references to previous studies), some of which propose a highly articulated and fine-grained structure in terms of phrasal hierarchy and/or linear precedence. The earliest cartographic theories already assumed the existence of more than one TopP in the left periphery; according to this framework, in Romance languages (and therefore, under given generative hypotheses, universally), topical phrases precede and follow the position of contrastive focus in a very specific recursive pattern: TopP > FocP > TopP, which is preceded in turn by the discourse interface position ForceP and followed by the lower IP interface position FinP (which assigns finiteness to dependent clauses). This initial scheme has been developed in follow-up studies, in several different language-specific patterns, which are too complex to generalize to this work and would thus overcomplicate the issue of a distributional analysis of the left periphery.

If the periphery is not left empty, initial elements usually correspond to the main topic of the clause or, in case the topic is inherited from the previous context discourse-wise, an element in focus. Lower fronted elements can reflect different informational features, including: secondary topics, contrastive foci, new information foci (assuming that new information foci should be distinguished from topics at all). In general, since the Anatolian peripheral topics are not identified by a lack of morphology (fronted verbs and fronted nouns are inflected), and since the landing position in the linear realization of the periphery is very similar, the distinction between topical and focused material in Anatolian mostly relies on discourse-semantics. Contrastivity, however, if present, is regularly marked by the clitic head (in Luwian: *-pa*), which can attach to foci but also to topic-material (marking a so-called contrastive topic). Additivity, is also generally overtly marked by a clitic head (in Luwian, by the additive focus marker *-ha*).

#### *§4.4.1. Fronting of nominals and pronouns, including subjects*

In Luwian, the position occupied by the highest topicalized/fronted nominal constituents is the leftmost one in the clause; the constituent is generally inflected and preserves the morphological markers of its grammatical features. Topicalization, both the non-contrastive and the contrastive one, usually produces a non-canonical order of constituents,

which may result in an initial orthotonic nominal,<sup>236</sup> when no left peripheral “connective” or adverbial is present, or, again, in a fronted adverbial.

- [24] *wattin kwi Hattusilis Suppiluliumis*  
 Mountain.ACC.SG when H.NOM S.NOM  
*ha ... sakatalisanta*  
 and s.PST3PL  
 “When Hattusilis and Suppiluliumis ... s.-ed this mountain...”<sup>237</sup>

- [25] *Kamanis -pa -wa kwi*  
 K.NOM pa QUOT when  
*nimuwizzas asta*  
 child.NOM.SG be.PST3SG  
 “When Kamanis was a child...”<sup>238</sup>

Note that in [25] the topic is additionally marked as contrastive by the presence of *-pa*, while the topic of [24] is not.

Among the nominals that can be fronted, one should, of course, also count free pronouns as shown by the initial pronoun in [26], in a contrastively marked peripheral position:

- [26] *apati -pa-wa imras(sa) Runtiyas haramma tarpitu*  
 That.D/L.SG pa QUOT field.GEN.SG R.NOM terribly(?) walk.IMP3SG  
 “To *him* may Runtiyas of the field come terribly (= may Runtiyas of the field punish him terribly)”<sup>239</sup>

For further discussion on the orthotonic demonstrative and personal pronouns and on their informational status, cf. Chapter 3, §§2–3.

<sup>236</sup> Cases of fronting of an entire PP constituent are not generously attested, but a case may be the one in KARKEMIŞ A4d, §1 (with at least three fronted elements and a very rich left periphery; cf. Chapter 6, §2.3, example [12]).

<sup>237</sup> ANCOZ 5, §3; Hawkins 2000, 350; improved by Poetto 2010, 132. Text: (MONS)wa/i-ti-na kwa/i-i <sup>1</sup>HA+LI-sa <sup>1</sup>PURUS.FONS.MI-sa-ha | tá-ti-sa | “INFANS”-ni-sa-ha | (L218)sà-ka-ta-li-sà-tá.

<sup>238</sup> KARKEMIŞ A6, §18; Hawkins 2000, 125ff. Text: <sup>1</sup>ka-ma-ni-sa-pa-wa/i | kwa/i-i-’ | INFANS-ni-sa | á-sa-tá.

<sup>239</sup> ŞIRZI §6; Hawkins 2000, 323f. Text: | á-pa-ti-pa-wa/i+ra/i-ta | i-mara/i-sá (DEUS)CERVUS<sub>2</sub>-ti-sá |(L464)ha+ra/i-ma PES<sub>2</sub>.PES-pi-tu.

#### §4.4.2. Fronting of adverbials

Adverbials can also be sentential topics (note, again, the contrastivity marked by the *-pa* added to the fronted *zin* in the following example):

- [27]     *zin*     *-pa*     *-wa*     *-tta*     *Sarrumas*  
           here    *pa*        QUOT    PTCL    S.NOM  
           *Alanzuwas*        *ha*        SOLIUM+MI-i  
           A.NOM            *ha*        sit.PRS3PL  
           ‘‘On this side shall Sarruma and Alanzuwa sit/dwell’’.<sup>240</sup>

Fronted preverbs also seem to exist; nevertheless, given the structural ambiguity of several occurrences, it is important to establish whether the fronted element is, in fact, a preverb, or a postposition working with a dative complement:

- [28]     *parran* *-pa* *-wa* *-mu* *zas*     ... *Tarhunzas* *huhassatti*  
           before *pa* QUOT I.D/L this.NOM.SG T.NOM     run/walk.PRS3SG  
           ‘‘(Before)/(for) me shall this Tarhunzas march’’<sup>241</sup>

The two possible interpretations have structural and semantic consequences: if the fronted place-word is to be intended as a preverb, the fronting regards the predicate, even though the verbal head is not moved. If, on the contrary, the fronted element is a postposition, referring to the *-mu* that has been moved and occupies the standard clitic peripheral position, then the informational movement regards an entire PP. The second hypothesis is to be preferred: given the presence of a contrastivity marker *-pa*, the dative *-mu* seems to be the best candidate to be the target of contrastive semantics. The context of the TELL AHMAR 6 inscription seems to support this interpretation: the ruler defeated his father's enemies with the help of his master (§§4–6), but it was in front of him (not of his master) that the god shall march.

<sup>240</sup> ÇİFTLİK §10; Hawkins 2000, 449ff. Text: | zi-pa-wa/i-ta (DEUS)sa<sub>5</sub>+ra/i-ru-ma-sá (DEUS)á-la-zú-wa/i-sa-ha SOLIUM+MI-i.

<sup>241</sup> TELL AHMAR 6, §7; Bunnens and Hawkins 2006, Chapter 2. Text: PRAE-pa-wa/i ||-mu | za-a-sa | EXERCITUS-la/i/u-na-si-sa (DEUS)TONITRUS-sa | hu-ha-sà-ta-si.

§4.4.3. *Fronting of finite verbal forms, preverbs and negation*

In a limited number of attestations, even an initial inflected finite verb can occupy a topical position. Finite verb movement to the leftmost informational slot in the sentence architecture is a phenomenon that is generally not present in the modern European languages on which most cartographic models have been tested; indeed, the most widely attested forms of modern Indo-European V(P) topicalization usually involve a copying or reduplication of the verbal phrase, with either a non-finite or finite form instantiated in the topical position, as in the following examples from Swedish and Yiddish (from Källgren and Prince 1989):

- [29] *Läser boken gör han nu*  
 reads book.THE does he now  
 “Reading the book, he is now”
- [30] *Leyenen leyent er dos bukh yetst*  
 read.INF read.PRS3SG he the book now  
 “As for reading, he’s reading the book now”

Verb topicalization in Luwian allows the predicate to maintain finite inflection, just as the nominal one is generally unable to delete the morphology (a few instances of *nominativus pendens* exist in Hittite, but they are not prevalent<sup>242</sup>). The following examples show predicate topics in Kizzuwatna Luwian (where one cannot exclude an influence of Hurrian on the word order) and in Iron age Luwian (in [32], the topic is additionally marked as contrastive by *-pa*<sup>243</sup>, just like *-(m)a* or *-(y)a* regularly mark fronted predicates in Hittite; cf. Bauer 2011):

- [31] *ililhai -ti malhassassis naniyas*  
 wash.PRS3SG REFL ritual.of.NOM.SG lord.NOM.SG  
*taparu*  
 manipulation.N/A.SG  
 “The ritual-lord washes (away) the ‘manipulation’”<sup>244</sup>
- [32] MALLEUS.CAPERE *-pa -wa -an Alantimuwas*

<sup>242</sup> Examples marked by additive *-ha* also exist (e.g. KARATEPE 1, §§5, 7, 25, 51; cf. Hawkins 2000, 49, 52, 55).

<sup>243</sup> For a discussion on Hittite hanging topics cf. Vai 2011, in particular 39ff.

<sup>244</sup> KUB 32, 9 ro. 16 (integrated based on dupl. KUB 32, 8:30); Starke 1985, 87ff. Text: [(i-li)-il-h[(a-i)]-t[(i)] ma-al-ha-aš-š[(a-aš-ši-iš) E]N-aš ta-pa-nu.

carve.PRS3SG      *-pa*    QUOT    he.ACC    A.NOM  
 “Alantimuwas carved it”<sup>245</sup>

These patterns, distributed both in the second and in the first millennium, are, however, rare (fewer than 20 occurrences if one excludes the Luwo-Phoenician bilinguals from Cilicia, on which see now Yakubovich 2015). Of course, sentences in which the verb is the only accented constituent should not be counted, as the linearization is entirely based on the fact that the predicate is the only possible prosodic head for the clitic elements, which, in Luwian, also include unaccented *wh*-words.

[33]      *tanuwahha*      *-wa*      *-an*      *hwi*  
           build.PRS1SG    QUOT    he.ACC    when  
           “When I set him up”<sup>246</sup>

It is important to stress that the movement of the verb to the leftmost slot does not produce a copy of an element that is still present in the clause, but rather features a proper fronting of the finite verb to the peripheral area, in a fashion that could be compared to the processes attested in Vedic and discussed by Hale (1987).

A number of fronted finite verbal forms in Foc or Top in Luwian are inflected in the imperative. Contrary to other languages, the position of the imperative verbal head in Luwian is not raised to a peripheral slot except for informational purposes: both *in situ* and fronted imperatives are attested in the corpus, with *in situ* ones outnumbering the fronted ones to a large extent:

[34]      *assaza*                      *Pihammi*  
           tell.IMP2SG              P.D/L  
           “Say to Pihammi: ...”<sup>247</sup>

[35]      *apati*      *-pa*      *-wa*      *Tarhunzas*              *Hipatus*  
           he.D/L    *pa*      QUOT    T.NOM                      H.NOM

<sup>245</sup> SHEIZAR §8; Hawkins 2000, 417ff. Text: MALLEUS.CAPERE-*pa-wa/i-na*  
<sup>1</sup>LOCUS||-L273-*wa/i-sa*.

<sup>246</sup> SULTANHAN §10; Hawkins 2000, 466ff. Text: *ta-nu-wa/i-ha-wa/i-na* |REL-i.

<sup>247</sup> ASSUR Letter E, § 1; Hawkins 2000, 535ff. Text: | *á-saš-za* [|] *pi-ha-mi*.

*Sarrumas*                      *sali(z)zantu*  
*S.NOM*                              *litigate.IMP3PL*

“Against him may Tarhunzas, Hepat and Sarruma litigate”<sup>248</sup>

Therefore, cases including the one in [34] need to be analysed in terms of being motivated by informational fronting. Furthermore, these cases do not differ from those in which an indicative verbal form is topicalized. It is worth noting that, while the situation in Hittite is similar, Bauer (2011, 46f.), showed that Hittite does not have fronting of imperatives except when they are in some kind of focus, marked by a contrastive or additive marker (*-(m)a* and *-ya* respectively).

Finally, in a small number of cases, the negation seems to be raised to a left prominent position.<sup>249</sup> The construction is only attested for non-prohibitive negations, while, on closer inspection, all of the attested patterns take the form [Neg] [*wh-*] [Verb], which, combined with Huggard’s analysis of the *wh*-indefinites as prosodically deficient elements remaining within the vP/VP area, may indicate that the entire NegP was fronted, and not just the negative element; alternatively, the pattern in [36] may only be analysed as a fronting of the negation, with insertion of a contrastivity marker *-pa*, followed by a low subject in:

[36]	<i>na</i>	<i>-pa</i>	<i>-wa</i>	<i>-an</i>	<i>kwis</i>	<i>i(z)zistai</i>
	not	<i>pa</i>	QUOT	he.ACC	who.NOM.SG	celebrate.PRS3SG

<sup>248</sup> GÜRÜN §2; Hawkins 2000, 296ff. *pa-ti-pa-wa/i-’* (MAGNUS.DEUS) TONITRUS (MAGNUS.DEUS)*hi-pa-tú-sa<sub>5</sub>* (MAGNUS.DEUS)*SARMA LIS*; over 120 occurrences of non-initial imperatives are present in the combined corpora, indicating that the pattern is the regular one.

<sup>249</sup> The unsurprising correlation between Neg fronting and interrogative constructions apparently present in Hittite is impossible to investigate for Luwian, given the limited amount of questions identifiable with certainty in the corpus. One case may be represented by ASSUR Letter A, §6: | NEG<sub>2</sub>-a-wa/i | ara/i-pa-i-mi-i-sa | za-na | a-pa-ha (“PES<sub>2</sub>”)a+ra/i-ta-’ | ka+ra/i-mi-sà(URBS) “Doesn’t Tarpamis travel to and from Kar<ke>mish?”. The sentence is, however, problematic for several reasons, including the strange adverbial use of the sequence of demonstratives *zan apan-ha* and the apparent right dislocation of the uninflected(?) locative(?) complement Kar<ka>mis.

“Who does/will not celebrate him...”<sup>250</sup>

Of course, this example also exhibits a peculiarity typical of languages that may front the negative element and in which such an element can also negate pronominal and nominal elements and not just verbal ones: in cases like [36], it is structurally problematic to decide whether the negative element *na* is referred to the predicate or to the indefinite subject of the clause. On *na* negating both nominals and verbs see Morpurgo-Davies (1975).

#### §4.4.4. *Fronting of wh-subordinators*

The subordinators and *wh*-elements of Luwian can undergo fronting, while ending up occupying either a lower peripheral slot or the leftmost slot. In both cases, the fronting of the relative pronoun matches a specific presuppositional semantics in what was traditionally labelled the “indeterminate” relative clause. In the next chapter, other subordinators attested in Luwian and going back to the inflection of an original *wh*-element of Proto-Anatolian and Proto-Indo-European will be discussed.

<sup>250</sup> KARKEMIŞ A17b, §4. Hawkins 2000, 176f. Text: NEG<sub>2</sub>-pa-wa/i-na kwa/i-sa i-zi-i-[sa-ta-i].



## Chapter 6 - Sentence coordination, subordination and restructuring.

### §1. Coordination and discourse

Coordination is a strategy to connect two clauses that hierarchically belong to the same level discourse-wise. Binary asymmetric endocentric coordination is assumed in this work to be the rule for both phrasal and sentence coordination. This implies, of course, a syntactic structural account of coordination, which is not oriented to the *semantic* coordination implied in paratactic constructions, but rather to the investigation of coordination driven by operations on the syntactic level.

#### §1.1. Anatolian clause-initial clitic markers of contrastivity and additivity

While Anatolian certainly features DP/NP coordination, by means of additive markers such as the Hittite *-(y)a* and the Luwian *-ha*, there is sparse evidence these particles also coordinate whole clauses.

In Hittite, the clitic element *-(y)a* never occurs unless a constituent or a prosodic head different from a connective is fronted (Hoffner and Melchert 2008, 400f.). The same constraint applies to the “adversative” *-(m)a*, which has been consistently described as a contrastivity marker.

[1a]	<i>assu</i>	<i>-ya</i>	<i>3-ŠU</i>	<i>sarnikzi</i>
	good.N/A	<i>ya</i>	3-times	compensate.PRS3SG
	“He shall also replace the goods threefold” <sup>251</sup>			
[1b]	<i>UDU-us</i>	<i>-ma</i>	<i>-za</i>	<i>SILA<sub>4</sub>-an</i>
	sheep.NOM.SG	<i>ma</i>	REFL	lamb.ACC.SG
	<i>natta</i>	<i>kappuwaizzi</i>		
	not	take.care.PRS3SG		

<sup>251</sup> KBo 6, 4 i 5; Hoffner 1997. Text: a-aš-šu-ya 3-ŠU šar-ni-ik-zi.

(The cow does not take care of the/its calf, ...) “(while/but) the sheep does not take care of the/its lamb”<sup>252</sup>

In Luwian, the clause-initial additive and contrastive markers *-ha* and *-pa* also usually occur when attached to a fronted constituent or head.

[2a] *sanuta(s)sa -ha -wa mu zumilanzi 50 harwanni*  
*s.GEN ha QUOT me.D/L z...ACC.PL 50 send.IMP2SG*  
 “Send me also 50 z.’s of the s.”<sup>253</sup>

[2b] *wanattiyatin -pa -wa -tu muwidan ni lanti*  
*female.ACC.SG pa QUOT he.D/L seed.ACC not receive.PRS3PL*  
 “May they not receive his female progeny”<sup>254</sup>

Judging from the distribution only, it would be difficult to determine whether the Hittite *-(y)a* and the Luwian *-ha* had scope over the clause or over the constituent or head to which they are attached, with an additive value. Semantics shows that they had both functions: [2a] has the verb in additive focus.<sup>255</sup> Still, examples exist in which no logic progression with addition/expansion is featured and the element *-ha* must be analysed as a clause coordinator:

[2c] *★a wa -tu zitiyatiyanza paritunintu*  
*INTR QUOT he.D/L male.part.N/A.PL severe.IMP3PL*  
*wanattiyatiyanza -ha paritunintu*  
*female.part.N/A.PL ha severe.IMP3PL*  
 “May they severe his male genitals and may they severe (her) female genitals”<sup>256</sup>

<sup>252</sup> KUB 33, 37+ iv 5. Text: [UD]U-uš-ma-za SILA<sub>4</sub>-an *UL* ka-ap-pu-wa-iz-zi.

<sup>253</sup> ASSUR Letter A §11; Hawkins 2000, 534ff. Text: [(“FEMINA(?)”)sà-nu-ta-sa-ha-wa/i-mu |(L187)ZÚ-mi-la-zi-i 50 VIA-wa/i-ni.

<sup>254</sup> KARKEMIŠ A11b+c §29; Hawkins 2000, 104ff. Text: FEMINA-ti-i[a]-ti-pa-wa/i-tú (FEMINA.L462)||4?-tà | ni-i | CAPERE-ti-i.

<sup>255</sup> It must be noted, though, that occurring clause-initially does not imply that *-ha* is referred to the whole clause. It can very well appear clause-initially, attached to a specific fronted constituent, even in a subordinate clause, where clause coordination is excluded, e.g. HISARCIK 1 §3.

<sup>256</sup> KARKEMIŠ A11b+c §26f.; Hawkins 2000, 104. Text: 26 wa/i-tú-’ | VIR-ti-ia-ti-ia-za-ha | (“CULTER”)pa+ra/i-tú-ní-tú-u FEMINA-ti-ia-ti-ia-za-ha-wa/i-tú-u | (“CULTER”)pa+ra/i-tú-ni-i-tú.

The two clauses could be inverted without changes in the meaning of the sequence (for similar phenomena in Hittite, cf. Goedegebuure 2014, Chapter 8). As for *-pa*, the meaning seems to be consistently contrastive, introducing and selecting from a set of two or more alternatives. In some cases, however it is attached to clause-initial conditional *man*, which cannot be in Foc, thus it must have had scope on the whole clause:

[2d] *man -pa -wa -as SACERDOS-lis*  
 whether *pa* QUOT he.NOM priest.NOM.SG  
 “whether he is a priest...”<sup>257</sup>

### §1.2. The status of the Luwian orthotonic initial *pa-*

While the clitic *-pa* is generally attached to a fronted constituent or head, during the Bronze Age an orthotonic (or proclitic and prosodically accented, but certainly non-enclitic) element *pa-* is attested in around 70 occurrences, most of which emerge in very fragmentary contexts. In spite of the phonetic (but not prosodic) similarity with clitic *-pa*, the better-preserved contexts of the occurrence of *pa-* do not seem to feature an evident adversative or contrastive nuance, which, on the other hand, seems to be consistently present in the occurrences of the enclitic *-pa*:

[3a] *zawi -pa tappas-sa tiyammis*  
 here *pa* sky.N/A earth.NOM.SG  
*pa -ti kuwātin tappas-sa tiyammis nawa*  
*pa* REFL as sky.N/A earth.NOM.SG not  
*ayari tiyammis -pa -ti*  
 become.PRS3SG earth.NOM.SG *pa* REFL  
*tappas-sa nawa ayari*  
 sky.N/A not become.PRS3SG  
*za -ha malhassa [ ] apati nis ayari*  
 this *ha* ritual.N/A [lacuna] so not become.PRS3SG  
 “Here are earth and sky. As the sky does not become earth, the earth does not, on the other hand, become sky, so may this ritual not become [ ]”<sup>258</sup>

<sup>257</sup> KARKEMIŠ A2+3 §14c; Hawkins 2000, 109. Text: ma-pa-sa SACERDOS-li-sa

<sup>258</sup> KUB 35, 54 ii 41ff. Starke 1985, 65ff. Text: za-a-ú-i-pa t[ap-pa-aš-š]a ti-ya-am-mi-iš pa-a-ti ku-wa-a-ti-in [tap-pa]š-ša ti-ya-am-mi-iš na-a-wa a-a-ya-ri

- [3b] *duwazzas tiyammis awiti pa -an*  
*d.NOM.SG earth.NOM.SG come.PRS3SG pa (s)he.ACC*  
*kuis aritti*  
*who.NOM.SG halt.PRS3SG*  
 “The *d.* earth comes, who might halt her?”<sup>259</sup>
- [3c] *Lulahinz -tar hupparanz kuinzi hishiyanti*  
*L. A.PL PTCL belts.A.PL who.NOM.PL bind.PRS3SG*  
*pa -tar appa zastanz astummantanz -tta*  
*pa PTCL back these.ACC.PL gates.ACC.PL PTCL*  
*attuwalahiti nis dadduwar*  
*malice.A/I not move.IMP2PL*  
 “You who wear *l.* belts should not move back against these gates with malice”<sup>260</sup>

Because of their phonetics, orthotonic(?) *pa-* and enclitic *-pa* would seem the ideal candidates for a pair of elements with a common etymology. However, the lack of contrastive value of the former, and its tendency to frequently occur in modally charged sentences (with several occurrences in clauses that contain an imperative, as outlined by Anna Sadykova in a still unpublished contribution)<sup>261</sup> may indicate that the two forms are in fact unrelated. If it is indeed a marker of modality, orthotonic(?) *pa-* might be functionally comparable to Hittite *man* (Melchert, *pers. comm.*).

### §1.3. Disjunction of clauses

In Luwian, disjunction operates on clauses that lie on the same structural level. The operator is represented by the morphs *napa* and *nipa*, both of which regularly occur in absolute first position when they disjunct

[ti-y]a-am-mi-iš-pa-ti [t]ap-paš-ša na-a-w[a a-a-]ya-ri za-a-ha SÍSKUR-aš-ša  
 [ ]x a-pa-ti-i ni-iš a-a-ya-ri.

<sup>259</sup> KUB 35, 107 ii 4 (integrated based on parallels). Starke 1985, 240ff. Text: [(du-wa-az-za-aš t)]i-ya-am-me-iš a-ú-i-ti pa-an [(ku-iš a-ri-it-ti)].

<sup>260</sup> KUB 9, 31 ii 24f.; Starke 1985, 50ff. Text: <sup>D</sup>Lu-u-la-hi-in-za-aš-tar hu-u-up-pa-ra-za ku-in-zi hi-iš-hi-ya-an-ti pa-a-tar a-ap-pa za-aš-ta-an-za aš-tu-um-ma-an-ta-an-za-ta.

<sup>261</sup> “Syntax und Semantik der luwischen Partikel *-pa* und die Kognaten in anderen anatolischen Sprachen”, paper presented at the 33rd Deutscher Orientalistentag in Jena, September 2017.

clauses. Both of them can also disjunct single phrases, and in that case they regularly occur before the second disjunct element.<sup>262</sup>

[4]      *zati*      *-pa*      *-wa*      URBS+MI-*ni*      *kwis*  
 this.D/L    *pa*      QUOT    town                      who.NOM  
*attuwalahitati*      *tawiyān iri*  
 malice.A/I              towards come.PRS3SG  
*nipa*      *-wa*      *irhinzi*  
 or              QUOT      boundary.ACC.PL  
*arha*      MANUS.L218.LA/IU(-)*hai*  
 away      damage(?).PRS3SG  
*nipa wa*      *-as*      *zati*      *waniri*      *tarpi*      *taya*  
 or      QUOT    he.NOM    this.DAT    stele.DAT    hostility.with come.PRS3SG  
*wa*      *-tta*      *yaya*      *mara(t)ta*      *arha wallai*  
 QUOT    PTCL    this.N/A.PL    word.N/A.PL    away    destroy.PRS3.SG  
 “If someone comes to this town with malice, or damages(?) the boundaries, or comes with hostility to this stele and deletes these words...” (curse follows)<sup>263</sup>

## §2. Finite subordination

Following the standard taxonomy, subordinate clauses can be divided into the following classes:

1. Argument clauses: they replace an argument of the predication of the main clause (e.g. subjective or objective clauses) or represent a complement of a constituent thereof.
2. Relative clauses (RC): they modify a constituent in the main clause.
3. Adverbial clauses: they pattern with non-argument elements in the clause architecture of the main clause (e.g., temporal, causal, final clauses).

<sup>262</sup> On disjunction in Luwian, cf. Morpurgo-Davies 1975 and Hawkins and Morpurgo-Davies and 2010.

<sup>263</sup> CEKKE §§20-23; Hawkins 2000, 146ff. Text: | za-ti-pa-wa/i URBS+MI-ni kwa/i-sa MALUS-hi-tà-ri+i VERSUS (PES<sub>2</sub>)i+ra/i ni-pa-wa/i FINES-hi-zi ARHA MANUS.L218.LA/IU ha-i | ní-pa-wa/i-sa za-ti STELE-ri+i (SCALPRUM)tara/i-pi || CRUS-ia wa/i-ta za-ia mara/i-ta ARHA MALLEUS-i.

From the point of view of the predication, each class can be divided into finite and non-finite types, depending on the form taken by the predicate. In general, a non-finite subordinate will always be a constituent or a part of a constituent of the main clause because, lacking a finite predication, it can only exist as a part thereof. Finite subordination, on the other hand, can be produced by different strategies: they can be embedded (recursively nested inside the main clause or inside a constituent of it) or combined by adjunction.

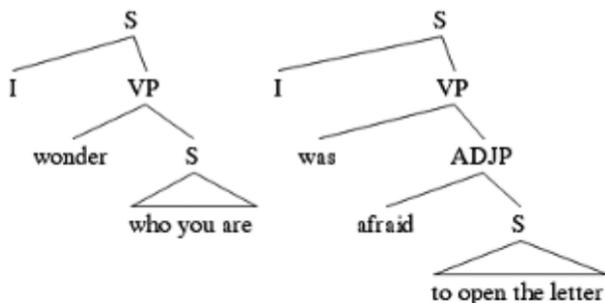
### §2.1. Embedding and clause-level adjunction

Cross-linguistically, subordination can be built by two different strategies – clause-level adjunction and embedding (cf. Ch. Lehmann 2004). Embedding is the typical strategy employed, for instance, in English or Italian, as well as in all modern Indo-European languages for argument and relative clauses. The whole subordinate clause is turned into either a generic constituent or a complement of a constituent of the main clause.

[5a] I wonder who you are. (Subordinate governed by the whole main clause)

[5b] I was afraid to open the letter. (Subordinate governed by the predicative adjective)

Ignoring the minor details of the derivations involved, the examples in [5a] and [5b] roughly correspond to the following highly simplified bare syntagmatic representations.

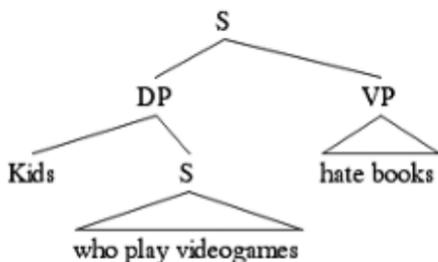


This pattern is produced by phrasal merging in the left periphery: “who” in [5a] and “to” in [5b] belong inside the CP of the subordinate clause (while in a more refined cartographic model, the positions occupied by the two elements would be differentiated). The merger of a complementizer or a raised *wh*-element and the clause returns a constituent that is hence embedded in the main clause (or inside a specific phrase thereof).

Similar interpretations may be given of relative clauses:

[5c] Kids who play videogames hate books.

The RC in the example is an adjunct on the level of the nominal constituent “Kids”; it is embedded inside a specific phrase and thus occupies a hierarchically well-defined position in the main clause.



While even in generative frameworks the exact details of RC adjunction may vary depending on the specific semantics (cf. Alexiadou et al. 2000, 1–53), languages that employ embedded RCs generally follow a pattern similar to the one in the simplified syntagmatic tree sketched above. In this case, the relative pronoun also occupies a peripheral position and produces a subordinate clause.

While subordination by embedding relies on a hierarchic nesting of a constituent clause in a specific syntagmatic position in the main clause, languages exist that predominantly or exclusively subordinate by clause-level adjunction. Subordination by clause adjunction does not involve the transformation of the dependent clause (into part of) a constituent of the main clause; rather, the clauses are juxtaposed and the subordinating elements do not act as complementizers. Regarding the example of RCs,

the clause adjunction strategy of relativization often results in correlative structures.

Famous examples in the history of modern linguistics stem from the study of the Warlpiri language by Hale (1976; cf. also Lehmann 2004):

- [6]      *ɲatjulu-lu*                      *lpa-ɲa*                      *kali*                      *tjaŋtu-ɲu,*  
 I.ERG                      PRG.SBJ                      boomerang                      trim.PST  
*kutja-npa*                      *ya-nu-ɲu*                      *ɲuntu.*  
 REL.SBJ                      walk.hither.PST                      you  
 “I was trimming a boomerang when you came up”

In this example, the subordinate clause has been analysed as adjoined to the main clause, because the subordinator is quite generic (and does not carry any temporal information); the subordinate clause, however, is not grammatical by itself, while the main clause is. Even though the generic subordinator of Warlpiri is left-peripheral, it is not included in a constituent of the main clause and can be used as a relative pronoun in a correlative scheme (Andrews 2007):

- [7]      *ɲatjulu-lu*                      *ka-rna-la*                      *makiti-ki*  
 I.ERG                      progr.SBJ.d/13SG                      gun.DAT  
*warri-mi*                      *janɲka-ku*  
 search.PRS                      that.DAT  
*kutja-rna wawirri*      *luwa-rnu ɲula-ɲku.*  
 REL.SBJ kangaroo shoot.PST it.INSTR  
 “I look for the gun with which I shot the kangaroo (< I look for that gun, that I shot the kangaroo with it)”

Correlative schemes for RCs can be easily recognized due to the fact that, at no point in the derivation, do the antecedent and the RC form a constituent.

The two strategies – embedding and clause-level adjunction – may coexist in a language. For instance, correlative constructions usually do not feature embedding, while existing in languages that regularly resort to embedding for other types of subordination, e.g., Latin, where sentence [8] is a correlative construction with co-indexed nominals (*quae ... ea*), while [9] is a system of subordination by embedding with a proper complementizer (*ne*):

- [8] *quae*                      *mihi*      *antea*      *signa*      *misisti*  
 which.N/A.PL            I.DAT      before      statue.N/A.PL      send.PST2SG  
*ea*                              *nondum*      *vidi*  
 it.N/A.PL                      not yet      see.PST1SG  
 “The statues you sent me before I haven’t seen yet”<sup>264</sup>
- [9] *timeo*                      *ne*              *non*              *impetrem*  
 fear.PRS1SG              COMP      not              succeed.CONJ.PRS1SG  
 “I am afraid that I will not succeed”<sup>265</sup>

After this overview, it is now necessary to examine the types of subordinate clauses attested in Luwian in order to investigate what strategies are actually employed.

### §2.2. Finite argument clauses in Hittite and Luwian

Argument clauses comprise a category that is underrepresented in Anatolian, while being virtually unattested in Luwian (with a possible but obscure example in BOYBEYPINARI 2, §4). In general, finite argument subordination is sparsely attested in Late Hittite texts. Phrase-structurally, they roughly correspond to the direct objects of *verba dicendi* or verbs of perception/knowledge, while possibly containing a finite verb.<sup>266</sup> They are introduced by elements such as *man*, *mahhan* or *kuit*; consider the following example:

- [10] *mahhan* *-ma*              LU<sup>U</sup>MEŠ                      URU<sup>U</sup> *Azzi* *auer*  
 when *ma*                      men                      Azzi(.of) see.PST3PL  
 URU<sup>DIDLHLA</sup>                      BÀD                      *-kan*      *kuit zahhiyaz*  
 cities                              fortress                      PTCL      that campaign.A/I  
*katta*      *daskeuwan*              *tehhun*  
 under      conquer.INF              take.PST1SG

<sup>264</sup> Cicero, *Ad Atticum* I.4,3.

<sup>265</sup> Cicero, *Ad Atticum* I.4,9.

<sup>266</sup> In Hittite, a non-finite variant with the predicative participle is also attested, e.g. *ammuk-war-an akkantan IQBI* (KUB 13, 35 iii 17) “He told me that he was dead” lit. “He told me him dead”. These forms are also unattested in Luwian.

“When the Azzi-people saw that I had started conquering the cities and fortresses with military campaigns...”<sup>267</sup>

In general, the completive use of *wh*-elements and elements with a similar behavior, in Hittite, seems to be a late development, as also duly indicated by Hoffner and Melchert (2008, 415ff.), and, in the case of *kuit*, it must have resulted from the grammaticalization of the neutral form of the relative pronoun into a complementizer, in a fashion similar to the development of completive *quod* in Latin. If, in Luwian, a similar shift ever happened, it is not attested in the available corpus. Therefore, finite argument subordination is currently unattested in Luwian.

### §2.3. Finite relative clauses in Luwian

A traditional approach to the study of relative clauses would be based on crossing the positional behaviour (preposed vs. postposed) and the restrictive or unrestrictive semantics. According to studies on the syntax of Hittite, non-restrictive RCs in Anatolian generally seem to be postposed; preposed RCs, on the other hand, can traditionally be ascribed to at least two different categories, which go back to the terminology introduced by Held (1957), with a refined taxonomy presented by Garrett 1994, who also discusses similar and divergent structures in Lycian, while introducing a fourth class of indefinite RCs that are also postposed, but do not match a non-restrictive semantics. Other studies dedicated to the topic of relativization in Hittite include Probert (2006) and Becker (2011), and Melchert (2016b), while Yates (2014a) proposes an extension of Garrett’s model to Luwian and Inglese (2016) successfully challenges an ill-advised attempt by Probert to interpret some structures attested in Hittite as featuring finite verb clause-embedding.

The more promising analysis of relativization in Hittite, however, was performed very recently by Huggard (2015). Building on what he labels the Held-Garrett model, he observes that the possible positions of the relative pronouns in the Hittite relative clauses are as follows:

<sup>267</sup> KBo 4, 4 iv 28f.; Goetze 1933, 138ff. Text: ma-ah-ha-an-ma LÚ<sup>MEŠ</sup> URU Az-zi a-u-e-ir URU<sup>DIDL.HI.A</sup> BĀD-kan ku-it za-ah-hi-ya-az kat-ta da-aš-ki-u-wa-an ta-eh-hu-un.

- 1) Fronted *wh*- (typical of what are traditionally labelled “indeterminate” RCs);
- 2) Clause-medial *wh*-, in which the position of the relative is actually very low in the clause hierarchy and strictly bound to a close preverbal position.

Huggard (2015, 156f.) showed that the behavior of a number of attested indefinite *wh*-elements of Hittite is explainable in terms of prosodic inversion, which suggests that the elements were prosodically deficient, thus limiting the possible configurations with respect to the surrounding phrases and words. A compelling argument in support of this interpretation is the fact that, when the *wh*-element is the only available constituent of a clause, except for the verb, prosodic inversion (inside the vP/VP) is the only possible explanation for the positively attested sequence [[V] [*wh*-]] (Huggard 2015, 159).

Since this behavior and the low collocation close to the verbal head are common among non-fronted relative pronouns inside RCs, as well as indefinite subjects and objects that are also expressed by *wh*-elements (cf. Chapter 3, §4.1.), Huggard’s hypothesis is that the semantic interpretation of the proposed RCs with a vP/VP-internal *wh*-element is existential, thus proposing to relabel the class of “determinate” RCs as “existential”. On the other hand, when the *wh*-element is clause initial and the semantics is rather indeterminate, he suggests that the structure was in fact “presuppositive” or, more precisely, that indeterminate RCs are in fact deep conditional correlative constructions.

To date, Huggard’s account is the only one that successfully explains all the attested patterns of the proposed RCs of Hittite based on a reasonable semantic and syntactic interpretation. The Luwian proposed relative clauses pattern with the Hittite ones. They occupy a low preverbal position ([13]); when fronted, on the other hand, they occupy a peripheral position higher than the IP layer and they feature presuppositional semantics ([11] and [12]; note that, in [12], the extra vP/VP position is guaranteed by the fact that the relative outscopes negation, while a fronted contrastive DP/NP occupies the leftmost slot, which is a quite typical case for the Iron Age Luwian examples, but a rare one in Hittite).

[11]      (a)      -wa      *kwis*      *zan*      *massanin kwisai*

INTR	QUOT	which.NOM.SG	this.ACC.SG	god.ACC.SG	fear.PRS3SG
(a)	-wa	-tta	apas		-ha
INTR	QUOT	PTCL	that.NOM.SG		ha
		apassan-za	sannawiyān-za		
		that.of.N/A.SG	good.N/A.SG		
		zari	anta	mammannai	
		here	down	look.PRS3SG	

“Who will fear this god, he too will behold his own good/benefit here”<sup>268</sup>

- [12] zati -pa -wa Atrisuha massaninza anni ...  
 this.D/L.SG pa QUOT A.D/L god.D/L.PL with(?) ...  
 2 hawin kwis na piyai ...  
 2 sheep.ACC.SG which.NOM.SG not give.PRS3SG  
 a -wa -tu -tta Atrisuhas wala awitu  
 INTR QUOT he.D/L PTCL A.NOM fatally(?) come.IMP3SG  
 “Who does not give two sheep ... to this Atrisuha with the gods,  
 for him may Atrisuha come fatally”<sup>269</sup>

- [13] kalmiyanin -ti -an kuis ata  
 stick.ACC.SG REFL he/it.ACC which.NOM.SG make.PST3SG  
 a -ti kalmiyanin laddu  
 INTR REFL stick.ACC.SG take.IMP3SG  
 “He who made it a stick for himself should take the stick for himself.”<sup>270</sup>

As for postposed RCs, some cases are attested in Luwian. A few non-restrictive examples occur in the HAMA texts, for instance HAMA 2, §3: “I myself built these fortresses...”

- [14] lakawannis -ha -wa FLUMEN.REGIO-sa  
 l.NOM.SG ha QUOT river-land.NOM.SG  
 kwanza izida

<sup>268</sup> SULTANHAN §§16f.; Hawkins 2000, 466ff. Text: | wa/i-ti-i | kwa/i-sa | za-na | DEUS-ni-na | kwa/i-sà-i | wa/i-ta | á-pa-sa-ha | á-pa-sa-za | sa-na-wa/i-ia-za | za-ri+i | a-ta | LITUUS.LITUUS-na-i.

<sup>269</sup> KARKEMIŠ A4d, §§1f.; Hawkins 2000, 101. Text: za-[ti]-pa-wa/i (DEUS)á-tara/i-su-ha DEUS-ni-za <CUM>-ni ANNUS-sa-li-z[a]-n[a] (PANIS)tú+ra/i-p[i]-n[a] BOS(ANIMAL) 2 OVIS(ANIMAL) kwa/i-[sa] NEG[<sub>2</sub>] | [DARE]-i [wa/i]-tú-tá-’ (DEUS)á-tara/i-su-ha-sa | (“CRUX”)wa/i-la/i/u |PES-wa/i-tú.

<sup>270</sup> KBo 13, 260 ii 10f.; Starke 1985, 260ff. Text: kal-mi-ya«-ni-in»-te-ya-an ku-iš a-t[a] a-ti kal-m[i-y]a-ni«-in» la-a-ad-du.

which.N/A.SG      make.PST3SG  
 “which the River-land also made (meaning partly obscure)”<sup>271</sup>

Other examples can be found in the corpus, e.g. KARKEMIŠ A2+3 §16 (text in Hawkins 2000, 108ff.) and ANCOZ 7, §§5f. (possibly with restrictive semantics, cf. Melchert 2016b, 289). The postposed construction also occurs 13 times in the KARATEPE 1 bilingual (Hawkins 2000, 48ff.), where the text in a few cases mimics the embedded structure of the Phoenician text (e.g., Hu. §§25–27// Ho. §§25–27):

- [15a]    *hataliha*            *-ha*            *-wa*            *harni(s)sa*  
 conquer.PST1SG    *ha*            QUOT            fortress.N/A.PL  
*PUGNUS-lumidaya*            *ipami*            *tawiyān*  
 strong.N/A.PL                            west            towards  
*na*            *-wa*            *kwaya*            *hatalainta*  
 not            QUOT            which.N/A.PL            conquer.PST3PL  
*hantilinzi*            *hantawatinsi*  
 former.NOM.PL            king.NOM.PL  
*amu*            *-wa*            *kwinzi*            *parran*            *asanta*  
 me.D/L            QUOT            which.NOM.PL            before            be.PST3SG
- [15b]    *w-*            *'n*                            *'nk*            *'ršt*                            *'zt*  
 and            subdued                            I            lands                            mighty  
*b-mb'*                            *šmš*  
 in.setting                            sun  
*'š*            *bl*            *'n*                            *kl*            *h-mlkm*  
 REL            not            subdued                            all            the.kings  
*'š*            *kn*            *l-pny*  
 REL            were            before.me  
 “I also conquered strong fortresses/lands to the West, which no former king who ruled before me had conquered”<sup>272</sup>

<sup>271</sup> Hawkins 2000, 413ff. Text: la-ka-wa/i-ni-sà-ha-wa/i(REGIO) FLUMEN.REGIO-tà-i-sà || kwa/i-za i-zi-i-tà. Cf. also Simon in press.

<sup>272</sup> Hawkins 2000, 52ff. Text: | (L274)hà-ta-li-hà-hà-wá/i (“CASTRUM”)ha+ra/i-ní-sa | PUGNUS(-)la/i/u-mi-tà-iá(“SOL”)i-pa-mí-i | VERSUS-na | NEG<sub>2</sub>-wa/i | kwa/i-ia | (L274)hà-ta-| | la-i-ta | FRONS-la/i/u-zi REX-zi | á-mu-wa/i | kwa/i-zi4 | PRAE-na | á-sá-ta | kwa/i-i-pa-wa/i-ara/i | á-mu (OCULUS)á-za-ti-wa/i-tà-sá-' (L274)ha-ta-li-hà.

Thus, here and in the other cases attested in the bilingual, the pattern is probably the result of the influence of the Phoenician text, in which RCs are regularly postponed.

Apart from KARATEPE 1, another possible case of a postposed RC can be found at the end of ASSUR Letter E (§§30–31):

- [16]     *niwarannin*        -*ha*        -*wa*        -*mu*        *tuwin*  
           daughter.ACC.SG   *ha*        QUOT        I.D/L        your.ACC.SG  
           *anni*        L77-*tis*  
           by           pledge.PRS2SG  
           *parran*    -*wa*        *amu*        *nawa*        *kwin*  
           before    QUOT        I.D/L        not.yet     who.ACC.SG  
           *kwisha*                *unitti*  
           someone.NOM.SG   know.PRS3SG  
           “You will pledge to me a daughter of yours, whom no one before me  
           has known”  
           Or: “You will pledge to me a daughter of yours that no one before me  
           has known”<sup>273</sup>

Since the exact provenance of the letters is uncertain, and since they do contain a few words that have been tentatively analysed as Semitic loans (Giusfredi 2012), it is uncertain whether this postponed collocation is to be seen as the result of interference, too, or as a further example of genuine postponed RCs. Semantically, it may be either unrestrictive or restrictive, as indicated by the two alternative translations provided. Syntactically, *kwisha* behaves as a low indefinite subject, which, consistently with the analysis defended in this work, should belong inside the vP/VP area; *kwin*, on the other hand is lower than the adverbial *nawa* (which may occupy a NegP or a higher IP-level adverbial slot), either by base generation or by prosodic inversion. Given the impossibility in terms of checking this structure against a number of other Luwian postponed RCs, trying to draw a more fine-grained scheme of the pattern in ASSUR Letter E would be an exercise in speculation.

<sup>273</sup> Hawkins 2000, 536ff. Text: | INFANS-ni-ha-wa/i-mu | tu-wa/i-na CUM-ni L77-ti-sa | PRAE-wa/i | á-mu | na-wa/i-’ | kwa/i-na | kwa/i-sà-ha-’ (LITUUS)u-ni-ti.

## §2.4. Adverbial clauses in Luwian

Adverbial subordinate clauses distributionally correspond to constituents of the main clause, which can be classified as “adjuncts”; in other words, complements that are not arguments of the verb (or of another role-assigning head) and not required to ensure the grammaticality of the clause. While in the case of argument clauses (e.g., the Hittite *kuit*-completives) the embedded status can be evaluated based on the lack of an argument in the main clause, adverbial clauses, from the perspective of the semantic-syntax interface, are higher hierarchic filters: it is the main clause that is required to complement and make grammatical the adverbial clause, and not the other way round. In Luwian, adverbial subordination can only be defined based on a loose, general syntactic criterion that neither requires nor predicts embedding: the presence of a subordinator:

1. *kuman*: temporal “when”; its exact etymology can be debated, but it is likely related to a *wh*-element of the *\*k<sup>w</sup>*- series;
2. *kwa/i*: “when”, also belonging to the *\*k<sup>w</sup>*- series;
3. *kwanza*: “because (also: when, while?)”, Iron age only, originally the neuter nominative/accusative to the relative pronoun;
4. *kwari*: temporal and conditional “when” and “if”; in all likelihood, originally an inflected indirect case of the relative pronoun, too;
5. *kwati(n)* “as, if”: very likely an ablative-instrumental of the relative pronoun;
6. *k(u)watti*: “where”, Kizzuwatna Luwian only, originally the dative/locative of the relative pronoun;
7. *kwi(t)ta(n)*: locative *wh*-element, introducing “where”-relatives.
8. *man*: “if, whether”; often clause-initial, but it can follow the clitic chain.

In Hittite some subordinators exist that seem to regularly occupy the leftmost position in the subordinate clause (the clearest case being *takku*, “if”), whereas most of the Luwian ones behave in a way that is similar to the relative *wh*-elements, with the following attested patterns:

- (A) [S “Connective”/XP ... v V] [S’ “Connective”/XP ... wh- ... v V]  
(B) [S’ “Connective”/XP ... wh- ... v V] [S “Connective”/XP ... v V]

(C)<sup>2</sup> [S' wh- ... v V] [S “Connective”/XP ... v V]

Pattern A – the postposed subordinate type – occurs a few times in the corpus, e.g. in KARAHÖYÜK §§1–2:

- [17] *Tarhunti* POCULUM.PES.L67(REGIO) STELE  
*T.D/L* P. stele  
*Armananis* PITHOS.VIR.DOMINUS *lam(i)<sup>2</sup>ni parran tuwatta*  
*A.NOM.* P. time.d/l before put.PST3SG  
MAGNUS.REX *Ir-Teššub* MAGNUS.REX  
Great King *I.* Great King  
*kwari* POCULUM.PES.L67(REGIO) *aratta*  
when P. walk.PST3SG  
“Armananis, Lord of the Pithos-Men, set up the stela to the Storm-god of P. at the time when Ir-Teššub the Great King came to P.”<sup>274</sup>

When this pattern, that is genuinely Luwian, is attested in the bilingual KARATEPE 1 text (§33), some positional peculiarities emerge:

- [18] *apatanza* *-pa* *-wa* *-tta* *alantanza*  
this.D/L.PL *pa* QUOT PTCL place.D/L.PL  
*kwiya* *hwi(s)santa*  
which.N/A.PL fear(some).N/A.PL  
*ruwan asta* CAPUT-*tis* *-wa* *-ri*  
before be.PST3SG person.NOM.SG QUOT REFL  
*kwi(t)tan* *hwi(s)saya*  
where fear.PRS3SG  
*harwin* *iuna*  
road.ACC.SG go.INF  
“In those places that used to be fearsome, where a person used to fear to walk the road...”<sup>275</sup>

<sup>274</sup> Hawkins 2000, 289ff. Text: (DEUS)TONITRUS POCULUM.PES.L67(REGIO) STELE LUNA.FRATER<sub>2</sub> PITHOS.VIR.DOMINUS || la-mi-ni-’ PRAE PONERE MAGNUS.REX i(a)+ra/i-’TONITRUS MAGNUS.REX kwi/i+ra/i-i(a) || POCULUM.PES.L67(REGIO) PES<sub>2</sub>+RA/I.

In this case, the general architecture is also very complex and aberrant, reflecting line by line the structure of the Phoenician inscription, in which two embedded RCs follow each other:

[19]	<i>w</i>	<i>b</i>	<i>mqqm</i>	'š	<i>kn</i>	<i>l-pnm</i>	<i>nšt'm</i>
	and	in	place.PL	REL	be.PST	formerly	fearsome.PL
	'š	<i>yšt'</i>		'dm	<i>l-lkt</i>		<i>drk</i>
	REL	fear.PST3SG	man	to.walk			road

Moving on to preposed subordinate clauses, pattern (B) features an initial (not first) subordinator, while the infrequent and highly dubious pattern (C) (*perhaps* attested in the KIRŞEHİR Letter, §10) has the subordinator located in the area which, in the metalanguage adopted in this work, corresponds to the highest informational projection of the clause. Should one assume that all adverbial subordinates were, in fact, embedded, pattern (C) would locate the whole S' in a peripheral slot of S, while the only possible solution to account for pattern (B) would be to assume that everything that dwells to the left of the subordinator comprised fronted material.

The reiteration of the left periphery in both S and S', however, remains problematic; as Huggard (2015, 160) notes when discussing postposed RCs, there seem to be two CPs; furthermore, one may add that two CPs definitely point to some sort of correlative diptych, rather than to proper embedding.

If one moves onto the examples in pattern (B), two superficially different cases emerge. In the first, KARKEMIŞ A11a §§14–15, the *wh*-subordinator occurs in a low hierarchic position, right before the preverb and the verb, while in the second, KÖRKÜN §4, it seems to be hierarchically higher.

[20]	<i>a</i>	<i>-wa</i>	<i>kummaya</i>	DEUS.DOMUS- <i>sa</i> (?)
	INTR	QUOT	pure	temples/temple-holies.N/A.PL
	<i>kumana</i>	<i>tamaha</i>		

<sup>275</sup> Hawkins 2000, 53ff. Text: | á-pa-ta-za-pa-| | wa/i-ta | “<sup>2</sup>LOCUS”-la/i-ta-za «-ha-pa-wa/i» | kwa/i-ia hwa/i-sà-ta rú-wa/i-na | á-sa-ta CAPUT-ti-sa-wa/i+ra/i kwa/i-i-ta-na hwa/i-sà-i-ia | | “VIA”-wa/i-na(“PES<sub>2</sub>”)i-u-na.

when build.PST3SG  
*wa -mu -tta zanzi*  
 QUOT I.D/L PTCL this.NOM.PL  
*kuta(s)sarinzi appan awinta*  
 orthostat.NOM.PL afterwards come.PST3SG  
 “When I built pure temples/temple holies, these orthostats came to me later.”<sup>276</sup>

- [21] (a) *-wa -ti kumana Astiru(wa)s ... warpassi*  
 INTR QUOT REFL.3SG when A.NOM w.GEN  
*parna tamata*  
 house.N/A.PL build.PST3SG  
*a -wa zan ... Tarhunzan*  
 INTR QUOT this.ACC.SG Tarhunza.ACC  
*apati isnu(wa)hha*  
 here build.PST1SG  
 “When Astiruwas built these houses of w., here I built this ... Tarhunza”<sup>277</sup>

In the first example, the position of the subordinator may appear to match that of low relative pronouns; still, the pattern is best explained as a case of topicalization of the direct object. In the second example, on the other hand, the position of the subordinator is certainly peripheral, although it does not occupy the leftmost slot in the clause.

All other *wh*-subordinators of Luwian can occupy these different positions: either left-peripheral or apparently low, without any consequences for the grammaticality of the clause. Consider the following example with the subordinator *kwari*:

- [22] *zwaninzi -ha -wa apanzi*  
 dog.NOM.PL ha QUOT that.NOM.PL  
*kwari asanti*  
 if be.PRS3SG

<sup>276</sup> KARKEMIŠ, A11a, §14; Hawkins 2000, 95ff. Text: a-wa/i PURUS.MI-ia DEUS.DOMUS-sa(?) ku-ma-na AEDIFICARE+MI-ha.

<sup>277</sup> Hawkins 2000, 172ff. Text: | wa/i-ti ku-ma-na á-sa-ti-ru-sá REX-ti-sá wa/i+ra/i-pa-si DOMUS-na “AEDIFICARE”.

(a)	-wa	2-zi	sanawinzi	warmutallinzi	ari
INTR	QUOT	2	good.ACC.PL	w.ACC.PL	raise.IMP2SG
(a)	-wa	-mu	harwani		
INTR	QUOT	I.D/L	send.IMP2SG		

“Also, if there are any of those dogs, take two good w. (dogs) and send them to me!”<sup>278</sup>

As is evident from the semantics, even in those cases in which the position is apparently low in the hierarchy and close to the verb, there seems to be no similarity with the indefinite function of the low subject relative pronoun.

Once again, the most consistent explanation is to assume that all the material that precedes the subordinator is indeed fronted, and that also in this case *kwari* belongs into the left-periphery.

### §3. Non-finite subordination and restructuring

Non-finite subordination in Anatolian makes use of the forms of verbal nouns and adjectives to convey the semantics of embedded predication. There are a few such strategies, including the employment of a participle replacing an adverbial clause, and the employment of a verbal noun (supine or infinitive in Hittite, only infinitive in Luwian), which closely depends on the inflected verb of the main clause. In either case, no subordinator is involved in the construction.

#### §3.1. The Luwian participle as a non-finite subordinate clause

In Hittite, several cases have been identified in which a participle is used in a structural and semantic context which is close to that of a non-finite subordinate. This strategy for relativization has been shown to be very ancient, as well as attested already in Old Hittite originals. These constructions are certainly grammatical in Luwian as well, and probably represent one of the original Proto-Anatolian strategies for subordination. Still, the Luwian corpus does not offer a large number of

<sup>278</sup> ASSUR Letter B, §§8ff.; Hawkins 2000, 534ff. Text: (“CANIS”)zú-wa/i-ni-zi-ha-wa/i | a-pa-zi | kwa/i-ri+i-’ | a-sa-ti | a-wa/i | 2-zi-i | | sa-na-wa/i-i-zi (“L481”)wa/i+ra/i-mu-ta-li-zi | PUGNUS-ri+i-’ wa/i-mu-u | VIA-wa/i-ni.

examples. This is due to the general lack of participles in the corpus occurring in a position that is not immediately attributive (on attributive participles see Chapter 2).

A case in which the participle acts as a non-finite temporal subordinate is, however, positively attested in the Iron Age corpus:

[23]	(a)	-wa	-tta	amiyanza	isnanza
		INTR QUOT	PTCL	my.D/L.PL	bed(?).D/L.PL
		<i>adammis</i>		<i>uwammis</i>	
		having.eaten.NOM.SG		having.drunk.NOM.SG	
		L462-ti <i>Santati arha</i>		<i>warahha</i>	
		strong.A/1 Santa.A/1 away		die.PST1SG	
		“In my bed, having eaten and having drunk, I died because(?) of(?) the mighty (god) Santa” <sup>279</sup>			

If this case is to be analysed as an instance of non-finite adverbial subordination, it is clear that it is embedded in a non-peripheral area of the main clause. The participles, however, may also be analysed as a sort of apposition to the unexpressed subject: lacking a larger corpus of comparable structures, dwelling any further on this issue would serve no useful purpose.

### §3.2. Infinitive and restructuring in Luwian

In Hittite, verbal nouns are consistently employed in constructions that involve a finite verb and an infinitive or a supine, which may hint at a restructured construction that is classifiable as non-finite subordination. For the construction to be relevant to the discussion of non-finite subordination, a condition needs to be met: namely, the verbal noun must display a verbal behaviour, instead of being merely a nominal argument of the predication.

Hittite features constructions involving the supine of the iterative verbs and an inflected form of the verbs *dai-* “put” or *tiya-* “step”, with an inchoative or intentional future semantics (see Hoffner and Melchert 2008, 338ff. §§25.37–38 and 2017 for a discussion and examples); it

<sup>279</sup> KULULU 2, §3; Hawkins 2000, 488ff. Text: | wa/i-ta | á-mi-ia-za<sup>-i</sup> | (“LECTUS”)i-sà-na-za || | “EDERE”-tâ-mi-i-sa| u-wa/i-mi-i-sá | L462-ti-i (DEUS)sà-ta||-ti-i | *ARHA* | (“MORI”)wa/i+ra/i-ha-’.

also features patterns involving an infinitive and inflected form with regard to a number of verbs, resulting in a mild final construction or a more generic completive structure (Hoffner and Melchert 2008, 332ff., §§25.10–36).

Structurally, the constructions that feature the use of a final supine or of completive infinitive in Hittite can only be described as non-finite embedded subordination; the embedded clause, or the remnant thereof after restructuring, has no left periphery, while the pronominal elements that refer to the valency of the non-finite form generally climb to the left peripheral area of the main clause, in the same way as the constructions with two finite verbs.

[24]    *nu*        *-mu*        ÉRIN<sup>MES</sup> *peskiwan dair*  
 INTR    I.D/L    troops    give.SUP    put.PST3PL  
 “And they started sending troops to me”<sup>280</sup>

[25]    *n*         *-at*        ANA<sup>D</sup>UTU-ŠI    *uwanna handair*  
 INTR    it.ACC    king.D/L        see.INF    arranged.PST3PL  
 “They arranged for the king to consider (lit. see) it”<sup>281</sup>

According to the attested evidence, Luwian makes a more limited use of these structures, which depends, on the one hand, on the absence of a supine in the paradigm of the verbal noun – which obliterates the possibility of having a final construction comparable to the Hittite one – and, on the other hand, may hint at a lower tendency in Luwian towards embedded structures, as previously observed when discussing the absence of completive *wh*-elements and the overwhelming preference for preposed correlative RCs.

However, in Luwian there are a few types of periphrastic restructured constructions involving an infinitive form of the verb, which will be discussed in the next sections.

<sup>280</sup> KBo 3, 4 iii 31f.; Goetze 1933, 76f. Text: nu-mu ÉRIN<sup>MES</sup> pí-es-ki-wa-an da-a-ir.

<sup>281</sup> HKM 63: 20f.; Alp 1991, 238ff.; Hoffner 2009, 216. Text: na-at A-NA<sup>D</sup>UTU-ŠI u-wa-an-na ha-an-da-a-ir.

§3.2.1. *The Luwian verb ta- with infinitive*

The infinitive + *ta-* inchoative construction is probably a syntactic/semantic ghost. It is only found in the bilingual text from KARATEPE 1 (Hu. 48//Ho. 48; Hawkins 2000, 54ff.) in a single occurrence where the construction mimics a problematic pattern of the Phoenician text, with a regular V-S order of the main sentence constituents and the sequence *ylk zbh* in which the first element is certainly a verb of (figurative?) motion, while the second may be either a noun for “offer” or an inflected form of the verb “to offer”, with no way to solve the ambiguity because the construction is a hapax in Phoenician as well:

[26a]	(a)	-wa	-an	i(z)zistuna	taya	
		INTR	QUOT	he.ACC	celebrate.INF	stand.PRS3SG
		<i>hapis</i>		<i>tanimis</i>		
		river(.land).NOM		every.NOM		
[26b]		w-	<i>ylk</i>	<i>zbh</i>	<i>l</i>	<i>kl</i>
		and	bring(?)	offer	to.him	all
						the-district(?).PL
						“And every/all district(s) stand(s)/begin(s) to honour him (Phoen: brought an offer to him)” <sup>282</sup>

While Hittite features a similar construction with the verb *tiya-* plus infinitive, this is the only clear case in which the Luwian infinitive is built with *ta-*. Thus, the very idea that the semantics was inchoative is speculative (nor is it motivated by the corresponding Phoenician construction, if one follows Amadasi Guzzo’s 2000 interpretation). While the semantic match is clearly elusive, structurally the Luwian construction is not different from a normal completive infinitive one, with a meaning that can be rendered in English with a weak final nuance: “stand to” plus infinitive. As for the syntax of the Phoenician version, it is complex, but the order of constituents is almost certainly marked, with a V-O-S order, which will introduce a list of offers in the rest of the line. It is very likely that, in this case, the Luwian scribe(s) resorted to a refined serial structure in the Luwian version in order to try and translate a difficult passage of the original Phoenician text.

<sup>282</sup> Hawkins 2000, 45ff. Text: wa-na | i-zi-sa-tu-na ta-ia (“FLUMEN”)há-pa-ra/i-sá | OMNIS-mi-i-sa. For the Phoenician, Amadasi Guzzo 2000, 79f.

### §3.2.2. Luwian final/completive infinitive constructions

Beside the KARATEPE occurrence, the cases of embedded infinitive subordination are attested with the verbs *pipassa-* “grant”, PES<sub>2</sub>.PES<sub>2</sub>-*da-*, “walk, go”, and possibly *piya-* “give”.<sup>283</sup>

- [27] (a) *-wa -mu taskwirinzi sarra l(a)una*  
 INTR QUOT I.D/L land.ACC.PL above take.INF  
*pipassaya*  
 grant.PRS3SG  
 “He will grant me to take the lands above”<sup>284</sup>
- [28] *zatiyanza -pa -wa DEUS.DOMUS...*  
 this.D/L.PL *pa* QUOT temples  
*kwis witi massani iziuna*  
 who.NOM.SG come.PRS3SG god.D/L.SG do.INF  
 “Who(ever) comes to these temples to worship (lit. “do”) the god”<sup>285</sup>
- [29] (a) *-wa -tu atuna piyattu*  
 INTR QUOT he.D/L eat.INF give.IMP3SG  
 “May they give him food/to eat”<sup>286</sup>

In example [28], the following syntactic features can be noticed:

- (1) Argument pronouns that refer to the infinitive form climb to the left periphery of the finite clause;
- (2) The embedding is limited to one level of recursion;
- (3) The semantics is slightly final;
- (4) The infinitive is an argument complement of the finite verb of the main clause;

<sup>283</sup> Contrary to the interpretation given in ACLT (<http://web-corpora.net/LuwianCorpus/search/>, data retrieved in January 2018), there is no reason to assume that *ha(s)si-* “satisfy” is also attested in this construction. In the passage in KARKEMIŞ A5a §8, *wa/i-mu-ta FEMINA ara/i-na | pi<sup>2</sup>-na (COR)ha-si-ha*, the reading *pi-na* (adverbial *apin*) is to be preferred to the infinitive *DARE-na*, which makes no sense syntactically and semantically.

<sup>284</sup> BOHÇA §9; Hawkins 2000, 479ff. Text: *wa/i-mu | “TERRA”-kwa/i+ra/i-zi SUPER+ra/i | (“CAPERE”)la/i/u-na | pi-pa-sa-ia*.

<sup>285</sup> ALEPPO 6, §4; Hawkins 2011. Text: *z[a-t]i-i(a)-za-pa-wa/i || DEUS.DOMUS (-)ha-tâ-zi<sup>1</sup> kwa/i-i-sa PES-wa/i-i-ti DEUS-ni i-zi-u-na*.

<sup>286</sup> KULULU 5, §15; Hawkins 2000, 486ff. Text: *wa/i-tu-u [â-tu]-na [pi-ia]-tu*.

- (5) The object of the non-finite predicate is in dative (as it also happens in some Hittite parallel examples).

These facts definitely point to a restructuring interpretation of these forms. Consistent with the idea that restructuring makes use of functional projections in the IP layer, it seems reasonable to assume that the infinitive is generated as a direct (or indirect) complement inside the vP/VP, and then raised to a higher position.

Example [29], on the other hand, is ambiguous. No element in the clause suggests that *atuna* is to be interpreted as a non-finite subordinate; the infinitive of the verb “to eat” can very well be substantivized and used as a mere nominal (as in the German *das Essen*). Therefore, in this particular instance, it cannot be determined whether the form should be translated as “to eat” or as “food”.

#### §4. Summary: coordination and subordination in Luwian

Luwian discourse-coordination is governed by connectives. These elements do not work exclusively as coordinating conjunctions, meaning that they do not strictly head the merger of two elements working at the same syntactic level, but rather mark logical or temporal progression between linked clauses, regardless of the level of embedding of the clauses.

As for subordination, while argument subordinate clauses are only non-finite, a number of subordinators exist that generally are located in a left-peripheral but usually not initial position. Preposed relative clauses (which represent the most frequent type in the corpus) seem to pattern with the Hittite ones, which supports Huggard's model (2015) for Luwian as well, making it potentially valid as a pan-Anatolian structure.

## Conclusions

The purpose of the present book was to investigate the syntax of the Luwian language and to provide an account of its syntactic structure. The theoretical framework which was employed was the a mild version of the generative cartographic approach; however, the structural representations were built basing on the data rather than assumed to be universally true in the first place, and the jargon was limited to those labels that are necessary for distributional analysis.

Contrary to what is sometimes stated in works that support different theoretical views, I hope to have shown that a configurational interpretation and constituency-based syntagmatic representation of the Ancient Anatolian languages, and of Luwian in particular, not only is possible, but also represents an important tool for investigation. Furthermore, in most cases, the results of such an approach are perfectly compatible with the data highlighted by more traditional accounts, and can complete them and contextualize them within a more general theoretical analysis. Of course, the theoretical and practical limits of the investigation have been duly highlighted: historical syntax is a field to which structural models can be fruitfully applied, but it is certainly not the field in which such models can be developed and tested in the first place. There is no space for experimental repetition, and the distinction between unattested patterns and ungrammatical ones can only be a theoretical construct, and not a starting point for research.

Nevertheless, the fine grained structure of the Luwian DP/NP and of the position of pronouns, presented in Chapters 2 and 3, for instance, proves that there is no reason to assume that Luwian was not “strictly configurational” (Bauer 2014, 268). Configurationality, indeed, is not a synonym for “rigid word order”, it rather means that the configuration of phrases obeys structural rules and constraints that are not merely linear (and that can be explained based on distributional analysis).

Informational movement of the noun up a hierarchical scheme of embedded informational positions can both explain the marked and unmarked nominal phrases attested in the corpus and highlight a map of the phrasal architecture that is similar - although not completely identical - to the one that has been identified, for instance, for Latin.

Not in all cases, of course, was a complete model of the syntactic structures achievable. This is the case of the vP/VP and IP layers (Chapter 4): while the raising of the core arguments has been shown to take place in order to successfully derive the attested patterns, some details cannot be clearly put in place based on the distributional data available. The relative position of the nominal elements and of the adverbial, however, could be safely investigated.

Finally, the most striking features of the Ancient Anatolian clause architecture is probably represented by the very peculiar and highly complex structure of the left periphery (Chapter 5), featuring a number of elements whose syntactic status still required a dedicated investigation. Based on the distribution of the leftmost elements (the “first” element position in Luraghi’s 1990 metalanguage) with respect to the presence or absence of the so-called Anatolian “connectives”, it has been argued that these elements mark logical and temporal progression between linked clauses, while true coordination of clauses seems to be produced by some instances of clause-initial clitic *-ha*. The interpretation of the left-periphery that was offered has immediate consequences for the structural account of coordination and subordination (Chapter 6). The analysis of the relative clauses attested in the corpus seems to have generally confirmed the results reached for Hittite by the work by M. Huggard (2015), at least for the proposed ones, while the dearth of proper postponed RCs outside the bilingual texts from Cilicia prevented a clear theoretical analysis thereof. As for embedded argument subordination, Luwian exhibits non-finite completive constructions with the infinitive, matching similar Hittite patterns, but morphologically lacks the supine; another difference from Hittite is the absence of any traces of a grammaticalization of the relative pronoun as a completive complementizer, and the lack of finite verb embedded argument subordination. Subordinators occur in adverbial clauses, and most of them go back, etymologically, to a pronominal series *\*kw-*.

The syntactic description of the Luwian language offered in this work is

an attempt at applying a weak phrase-structural model to the analysis of the syntax of an Ancient Indo-European language. Luwian was chosen because it is a generally well understood one and because of the size of the corpus, which made it processable during a two-year research project. But it was also chosen because of the fact that, in some features, it may appear to be more archaic or archaistic than Hittite: the lack of grammaticalized complementizers (Hittite has completive *kuit*), the scarcity of subordinators that are relegated to the absolute leftmost position (Hittite has *takku*), the significant number of true correlative structures are all facts that may make the language closer to a more ancient state of things. Of course, speculating on the syntactic structure of Proto-Anatolian, or even of Proto-Indo-European, would require a very realist approach to the evaluation of the proto-language, which will not be defended here, and it would, in general, go beyond the scope of this research. Nevertheless, Luwian proved to represent a fairly good experimental object of study for the application of the methods employed for this study, the main point of which is that the application of theoretical frameworks, when cautious enough to prevent overgeneralizations, can lead to interesting results even in fields in which such frameworks are still relatively uncommon.



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GIUSFREDI

A Study in the Syntax of the Luwian Language

The Ancient Anatolian corpora represent the earliest documented examples of the Indo-European languages. In this book, an analysis of the syntactic structure of the Luwian phrases, clauses, and sentences is attempted, basing on a phrase-structural approach that entails a mild application of the theoretical framework of generative grammar. While obvious limits exist as regards the use of theory-driven models to the study and description of ancient corpus-languages, this book aims at demonstrating and illustrating the main configurational features of the Luwian syntax.

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