

ANTIQUI AEVI GRAMMATICAE ARTIS  
STUDIORUM CONSENSUS

AAGASC SERIES MAIOR  
1

ANATOLISTICA  
INDOEUROPEISTICA  
E OLTRE  
NELLE MEMORIE DEI SEMINARÎ  
OFFERTI DA ONOFRIO CARRUBA  
(ANNI 1997-2002)  
AL MEDESIMO PRESENTATE

M. BARBERA, G. BORGHI, M. MARIANI,  
A. RIZZA, R. RONZITTI, V. S. TOMELLERI, M. VAI



TOMO I

QU.A.S.A.R. S.R.L.  
MILANO  
MMXI

Antiqui Aevi Grammaticae Artis Studiorum Consensus (AAGASC)

Salò - Italy

AAGASC was founded by Alfredo Rizza and Guido Borghi in 2010 to promote studies in the antiquities connected to grammar, philology and linguistics.

ISBN-10: 88-87193-19-3

ISBN-13: 978-88-87193-19-0

*Anatolistica, indoeuropeistica e oltre nelle memorie dei seminari offerti da Onofrio Carruba (anni 1997-2002) al Medesimo presentate.*  
(AAGASC series maior, 1). 2 tomi.

Layout: Alfredo Rizza (tomo I), Guido Borghi (tomo II).

(C) 2011. Complete work Qu.A.S.A.R., s.r.l., via Santa Sofia, 27. 20122 Milano - Italy

(C) 2011. All rights reserved by the single authors for the respective contributions.

Printed in August 2011

Series "AAGASC series maior" founded and directed by Guido Borghi and Alfredo Rizza

The present volume may be distributed and reproduced fully or partially provided that:

1- the content and the layout is not modified;

2- the distribution is nonprofit;

3- the names of the authors and the editors are always explicitly cited.

Modified or commercial versions, including translations, may be produced only under explicit authorization of the copyrights holders (Qu.A.S.A.R. and the single authors).

Cover and inner image:

R. Koldewey, *Das wieder erstehende Babylon. Vierte, erweiterte Auflage*, Leipzig: J. C. Hinrichs'sche Buchhandlung, 1925, Abb. 80.

## Sommario

### *Tomo I.*

Prefazione, di <i>Guido Borghi, Massimo Vai</i>	p. 7
The ritual for the Royal Couple CTH 416. Syntax of non verbal predicates and numerals, di <i>Alfredo Rizza</i>	p. 13
Osservazioni sulla periferia sinistra della frase in ittita, di <i>Massimo Vai</i>	p. 39
A Still Undeciphered Text? Il recente dibattito sulle nuove basi interpretative del <i>Ṛgveda</i> - <i>JIES</i> 37/1-2 (2009), di <i>Rosa Ronzitti</i>	p. 57
Sulla categoria dell'aspetto verbale in Osseto, di <i>Vittorio Springfield Tomelleri</i>	p. 67
“Partes Orationis”, “Parts of Speech”, “Tagset” e dintorni. Un prospetto storico-linguistico, di <i>Manuel Barbera</i>	p. 113
La comprensione del linguaggio figurato: nuovi spunti dalle neuroscienze cognitive, di <i>Manuela Mariani</i>	p. 147

### *Tomo II.*

Milano, Indoeuropa – ossieno Ricostruzioni indoeuropee per toponimi milanesi di sostrato celtico, di <i>Guido Borghi</i>	p. 7
Indoeuropeo $*G\tilde{n}-g^u-\check{o}-pl^{(a)}h_2t\check{o}-$ „pianura dei corsi d'acqua“ > lomellino <i>Gambolò</i> , indoeuropeo $*G\tilde{n}-g^u-\check{o}-l\check{o}g^{\check{h}}it\check{a}h_{2/4}$ „ottenuta dai corsi d'acqua“ > milanese <i>Gambolo(eu)</i> ita: toponimi a primo elemento idronimico equabile di $*g\check{o}n-g^u-\check{a}h_{2/4}$ > <i>gāṅgā</i> „fiume“ ( <i>Gange</i> )?, di <i>Guido Borghi</i>	p. 331



Alfredo Rizza

## The ritual for the Royal Couple CTH 416. Syntax of non verbal predicates and numerals.

### 1. Introduction<sup>1</sup>

The text of the ritual for the royal couple has been established on the basis of Otten/Souček 1969 and Neu 1980. The document is of great interest because it has a long well preserved section known from three major exemplars:

CTH 416<sup>2</sup>

Exemplar	Publications	Date
A	KBo 17.1 +	Ah I
B	KBo 17.3 +	Ah II
C	KBo 17.5(+)	Ah II
D <sup>3</sup> (+)? B?	KBo 17.2	Ah II

Exemplar D is to date considered a direct join to B,<sup>3</sup> but this must be questioned, so I prefer to give it here as separate.<sup>4</sup> The exemplars are all dated on paleographic evidence to the Old Hittite period, so they reflect for sure a stage of the language that cannot have been altered by any modernization that can be seen in the *codices recentiores* of the "late middle" and "new" Hittite period.<sup>5</sup>

CTH 416 is also of great interest because it gives a vivid picture of Old Hittite syntax. Let

---

1 This paper is part of a series of articles devoted to the study of the Ritual CTH 416. Another paper is in print (Holland/Rizza, to appear), and two other are in elaboration. I need to thank the Akademie der Wissenschaften und der Literatur Mainz (Kommission für den Alten Orient); the Alexander von Humboldt Stiftung for providing me with a two-year scholarship, and Prof. Dr. Dr. h.c. G. Wilhelm for being so generous while hosting me as a von Humboldt scholar. I need to thank Prof. Dr. Gary Holland, Prof. Dr. Paola Cotticelli and Dr. Massimo Vai for the various discussions about the present paper. I need to thank Charles Steitler that helped me with English; he could only read a part of this article, so the many errors are all to be ascribed to the author. My gratitude to Dr. A. Sideltsev who was so kind to let me have access to its unpublished work (Sideltsev, to appear). This article is a partial attempt at thanking Prof. Dr. Onofrio Carruba for all the time spent with us teaching Anatolian languages and many other things.

2 Cf. Otten/Souček 1969 (StBoT 8); Neu 1980 (StBoT 25), pp. XXI-XXII, 4-22; CTH, Nr. 416 listed also 2758/c (= KBo 41.40) and KBo 12.101. Košak, hethiter.net/: hetkonk (8.2011) does not include anymore KBo 41.40, but still lists KBo 12.101. Recently Holland/Rizza (to appear) gives a number of reasons why also KBo 12.101 should not be listed under CTH 416.

3 Cf. Košak, hethiter.net/: hetkonk (8.2011).

4 I will treat the problem in a forthcoming publication. Cf. *etiam* Holland/Rizza, to appear.

5 Traditionally Old Script, OS, in German tradition "ah", althethitisch, manuscripts were dated to the period of Hattusili I and his successors until Telipinu (ca. 1650-1500 b.C., cf. van den Hout 2009a, p. 72). From the latter down to Suppiluliuma I (-1350, cf. *ibidem*) we have the evolution of the so called Middle Script, MS, "mh", mittelhethitisch. Then the "New Script" (-1180, cf. *ibidem*), NS, "jh", jungthethitisch. The chronological development of the script does not automatically reflect a diachronic stage of the language. Obviously an OS document can only be, linguistically, Old Hittite (OH), while a MS manuscript can be MS/OH or MS/MH, i.e. a middle script copy of an Old Hittite text or an original Middle Hittite one. So a NS manuscript can be NS/OH, NS/MH or (NS)/NH. Recently, the chronology of the Hittite cuneiform tablets has been challenged. After the dating of certain sensible documents to the age of Telipinu (Wilhelm 2005), Popko 2007 pointed out the possible implications for the dating of the so-called OS tablets. They may need to be re-dated to the times of Telipinu, i.e. the end of the Old Hittite and the beginning of the Middle Hittite period. Even if the OS tablets should be re-dated, they still represent the oldest preserved stage of the language. Cf. *etiam* van den Hout 2009a, 2009b; Melchert 2008; Archi 2003, 2005; Marazzi 2010 (and references cited).

us have a look at some basic figures.

## 2. Predicate position

Considering the well preserved portion of the texts and the instances in which we can more safely reconstruct or guess how the texts was, we can count  $271 \pm 5$  clauses. As long as Hittite is predominantly verb final we give here the statistics regarding non final positions.

### 2.1. Non final predicate position

Out of  $271 \pm 5$  clauses, the predicate (included the nominal predicate) is not final in 16 cases. Surely understandable are, however, only 13 (the percentage range is 5,9% - 4,8%).

Among non final predicate clauses, 8 are V1.

### 2.2. V1

Instances of V1 are (composite text):<sup>6</sup>

i.22'-23', ind.prs: 3pl;

i.24'-25', ind.prs: 3pl;

i.27', ind.prs: 1pl;

ii.16, imp: 2.sg;

ii.55, interjection;

iv.16, nominal predicate;

iv.29-30, imp: 2.sg;

iv.38-39, ind.prt: 1sg.

**Total:** 8/16 (50%) - 8/13 (61,54%); 8/271 (2,95%).

In the terms of Luraghi 1990 those V1 instances are all "initial". There are no examples of "First position" verbs.<sup>7</sup>

### 2.3. #... V ...#

Instances of non final - non initial predicates are not always easily detectable. I could count a range of max 8, min 5 clauses. They are (composite text):

i.14'-15' (... V IO);

i.22' (... V GEN);

ii.45-46(?) (... V num)<sup>8</sup>;

ii.50 (... V num);

iv.15-16 (... V num-adN(5x));

iv.16 (... V num)<sup>9</sup>

iv.26-27 (... V GEN);

KBo 17.2 i.5' (... V num IO(2x))

**Total:** 8/16 (50%) - 5/13 (38,46%); 8/271 (2,95%) - 5/271 (1,85%)

On the function of non final predicates *cf. infra* and Vai 2011 (in this volume).<sup>10</sup>

<sup>6</sup> "Composite text" is the one given in Otten/Souček 1969.

<sup>7</sup> Luraghi 1990, pp. 12-13. "First position" should roughly correspond to "modified initial position", a terminology used by other scholars that can be found also in Holland 1980, pp. 39-40.

<sup>8</sup> Uncertain.

<sup>9</sup> On this example, *cf. infra*, sections about nominal predicates.

<sup>10</sup> Recent studies on the pragmatics of verb position in Hittite are Bauer 2011; Rieken 2011; GrammHitt, §§30.1-11; Sideltsev (to appear).



### 3. Non verbal predicates

On non verbal predicates in Hittite cf. Luraghi 1990, pp. 28-29; Cotticelli Kurras 1991, 1992; GrammHitt, §§30.22-30.<sup>11</sup>

#### 3.1. Statistics

In the ritual there are at least 17 "nominal" predicates:

- 5 with nominative adjectives/nouns.

Composite text:

ii.55-56 ([ *rijalaš* = *miš*, 'my ...');

iii.1-2 (*uktūreš*, 'eternal');

iii.2 (*uktūreš ašandu*);

iii.6 (*uktūreš*);

iii.7 (*uktūreš ašandu*);

5 more nominal sentences could be added, considering line iv.15-16<sup>12</sup>

- 1 with a genitive: iv.35 (*sulī-aš*, 'of lead');

- 1 or 2 with a numeral:<sup>13</sup>

iv.6 ("5");

iv.6 (1-EN);

- 6 nominative participle constructions without *eš*:

i.24 (*išḫaškanta*, 'bloodstained');

i.25 (*putalijanteš*, 'girded');

iii.25-26 (*ganganteš*, 'hanged');

iii.26-27 (*ganganteš*);

iv.9 (*išḫijanda*, 'binded' );

iv.20 (*išḫijanda*);

iv.31-32 (*ḫulalijan*, 'enwrapped').<sup>14</sup>

There are, also, probably:

- 3 or 4 locative predicates:

with noun ii.15 (<sup>URU</sup>*Kātapī*)

with adverbs iv.6 (*katti* = *mi*, 'by me');

iv.16 (*kattan*);<sup>15</sup>

iv.31-32 (*anda*);<sup>16</sup>

- 1 temporal predicate: ii.25 (*mištilija mēḫur*, 'in the time of *mištilija*').

The copula is expressed only for imperatives (*ašandu*, iii.2, iii.7).

In almost all the cases the nominal part of the predicate is last in the sentence, followed solely by the copula when expressed.<sup>17</sup> Exceptions are two instances in the same line: iv.16.

11 On general linguistics grounds I tend to follow the unified account of 'to be' sentences, in the lines of the tradition represented originally by Aristotle and recently restudied and restated in the works of Andrea Moro: cf. Moro 1993, 1997, 2005. I will not discuss in this article the terminological and theoretical problems connected to copular, nominal and existential sentences.

12 Cf. *infra*, §3.2.

13 Cf. *infra*, §4

14 Lines iv.30-32 are problematic. Here I can only remind that this portion of texts requires particular attention, but the problems it raises will not be treated in this work.

15 Problematic, cf. *infra*, §4.

16 As already remembered for *ḫulalijan* above, lines iv.30-32 require particular linguistic attention. These problems, however, will not be treated here.

17 Word order in 'to be' sentences: GrammHitt, §§30.28-29. Instances of 'nominal' predicate and copula are considered heavy constituents in Luraghi 1990, thus they are generally not available for operations of fronting. Cf. Luraghi 1990, p. 30. Instances of inverted nominal sentence with an orthotonic personal pronoun sub-

### 3.2. Non-final nominal predicates

Both possible instances of non verbal predicates that are not final occur in KBo 17.1 + iv.16.

(1) A<sup>18</sup> iv.14-22 (= B<sup>19</sup> iv.10-19)

§§

- 14 [m]a-a-an [a]-i-in wa-a-i-in pít-tu-li-u[(š-ša LU)]GAL-i MUNUS.LUGAL-ia  
 15 [d]a-aš-k[(e-e)]-mi nu-mu MUNUS.LUGAL 5 ga-a-pí-na-an TUR.「TUR」pa-a-i 1 BABBAR 1 「GE<sub>6</sub>」  
 1 「SA<sub>5</sub>」  
 16 [1] SIG<sub>7</sub>.SI[G<sub>7</sub>] Û 1 SÍG ZA.GÌN ta GIŠ-ru kat-ta-an 1-EN 5 al-ki-iš-ta-aš-「ši-iš」  
 17 [tá]k-kán [g]a-a-pí-na-an ku-wa-a-pí-it-ta 1-an ga-a-an-ga-aḥ-ḥi  
 18 3<sup>?</sup> x[ ]x TUR.TUR 1-EN ši-i-na-an ú-i-il-n[(a-a)]š ša-lu-i-ni-it[  
 19 x x x-it-ta a-ra-um-mi ḥal-ki-aš ḥar-ša[(-a-a)]r iš-ḥi-ia-an-「da」  
 20 [Z]ÍZ<sup>HLA</sup>-aš-「ša」ḥar-ša-a-ar iš-ḥi-ia-an-da ke-「e」-ša-an ḥu-u-ma-an-d[(a)]  
 21 [p]ád-da-ni-「i」te-e-eḥ-ḥi ne LUGAL-aš MUNUS.LUGAL-aš-ša [(ki-i)]t-kar-ša-me-et te-e-eḥ-ḥi  
 22 še-e-ra-aš-「ša」-an GAD-an pé-eš-ši-e-mi šu-uš [(LÚ-aš)] na-at-ta a-uš-zi  
 §

16: GIŠ-ru, B iv.12 GIŠ<sup>2</sup>ta-a-ru | A al-ki-iš-ta-aš-「ši-iš」, B iv.12 al-ki-iš-ta-a-aš-ši-iš | 17: ga-a-an-ga-aḥ-ḥi, B iv.13, ga-a-an-ga-aḥ-ḥé | 18: 3<sup>?</sup>, con. Neu 1980 | A ú-il-n[a-a]š, B iv.14, ú-il-na-a-aš | 19: a-ra-um-mi (= B iv.15), cf. Neu 1980 (StBoT 25), n. 25, 45 | A ḥal-ki-aš, B iv.15 ḥal-ki-ia-aš | 20: ke-「e」-ša-an, B iv.16, ke-e-eš-ša-an, cf. Otten/Souček 1969 (StBoT 8), p. 37, n. 16 | 21: [p]ád-da-ni-「i」, B iv.17 [pá]t-ta-ni-i | A te-e-eḥ-ḥi, B iv.17 te-e-eḥ-ḥé, B iv.18 te-e-eḥ-ḥé | A MUNUS.LUGAL-aš-ša, B iv.17 MUNS.LUGAL-ša | 22: pé-eš-ši-e-mi, B iv.18 pé-eš-ši-ia-mi

- |    |                                      |                     |                                     |                        |                 |
|----|--------------------------------------|---------------------|-------------------------------------|------------------------|-----------------|
| 14 | mān ai-n                             | wāi-n               | pittuli-uš = ša                     | LUGAL-i                |                 |
|    | when moan-sg.acc                     | pain-sg.acc         | torment-pl.acc = conn               | king-sg.dat            |                 |
|    | MUNUS.LUGAL-ia                       |                     |                                     |                        |                 |
|    | queen(sg.dat)-conn                   |                     |                                     |                        |                 |
| 15 | daškē-mi                             | nu = mu             | MUNUS.LUGAL                         | 5 gāpina-n             | TUR.TUR         |
|    | take-prs.1sg                         | conn = proN.1sg.dat | queen(sg.nom)                       | 5 thread-sg.acc        | small           |
|    | pā-i                                 | 1 BABBAR            | 1 GE <sub>6</sub> 1 SA <sub>5</sub> |                        |                 |
|    | give-prs.3sg                         | 1 white             | 1 black 1 red                       |                        |                 |
| 16 | 1 SIG <sub>7</sub> .SIG <sub>7</sub> | Û SÍG               | ZA.GÌN                              | ta                     | GIŠ-ru kattan   |
|    | 1 green                              | conn wool           | blue                                | conn                   | tree down/there |
|    | 5 alkištā-š = ši-š                   |                     |                                     |                        | 1-EN            |
|    | 5 branch-sg.nom = poss.3-sg.nom      |                     |                                     |                        |                 |
| 17 | ta = kkan                            | gāpina-n            | kuwāpit = ta                        | 1-an                   | gānga-ḥḥi       |
|    | conn = prtcl                         | thread-sg.acc       | each place                          | 1                      | hang-prs.1.sg   |
| 18 | 3 <sup>?</sup> x[ ]x                 | TUR.TUR             | 1-EN šina-n                         | wiln-aš                | šaluini-t       |
|    | 3 <sup>?</sup>                       | small               | 1 figure-sg.acc                     | clay-sg.gen            | šaluina-strm    |
| 19 | x x x-it-ta                          | araum-mi            | ḥalkij-aš                           | ḥaršār                 | išḥija-nd-a     |
|    | ?-prs.1.sg                           | barley-sg.gen       | head-nt.pl.nom/acc                  | bind-prtcpl-nt.nom/acc |                 |
| 20 | [Z]ÍZ <sup>HLA</sup> -aš = ša        | ḥaršār              | išḥija-nd-a                         |                        |                 |
|    | spelt-sg.gen = conn                  | head.nt.nom/acc     | bind-prtcpl-nt.nom/acc              |                        |                 |
|    | k-ē = ššan                           | ḥūmand-a            |                                     |                        |                 |
|    | this-pl.nom                          | all-nt.nom/acc      |                                     |                        |                 |
| 21 | pattan-ī                             | tē-ḥḥi              | n = e                               | LUGAL-aš               |                 |
|    | basket-sg.dat/loc                    | put-prs.1.sg        | conn = proN.3pl.nt.nom/acc          | king-sg.gen            |                 |
|    | MUNUS.LUGAL-aš = ša                  | kitkar = šmet       | tē-ḥḥi                              |                        |                 |
|    | queen-sg.gen = conn                  | head = poss.3pl     | put-prs.1sg                         |                        |                 |

jects probably undergo operations that are not exactly the same of what we mean here by predicate fronting, and this is probably why we can find heavy constituents as predicate preceding the subject. Cf. GrammHitt §30.29; Luraghi 1990, p. 29.

18 KBo 17.1 +

19 KBo 17.3 +

22	šēr = a = ššan	GAD-an	peššie-mi	š = uš
	on top = conn = prtcl	cloth-sg.acc	throw-prs.1sg	conn = proN.3.pl.acc
	LÚ-aš	natta	auš-zi	
	man-sg.nom	not	see-prs.3sg	

When moan pain and torments I take from the king and queen, the queen gives me five little threads: one white, one black, one red, one green and a wool blue. One tree is down (t)here, *five are its branches* and to each I hang one thread. Three?? ... small ... one clay figure with *šalwina-* ... *araummi*. Heads of barley are bound, heads of spelt are bound. I put these all in a basket, and that I put over the heads of the king and the queen. I throw a cloth on top, so nobody will see them.

At line iv.14, after a double paragraph line, begins the section dedicated to the ritual actions for freeing the royal couple from "moan, pain and torments" (*ai- wai-*, *pittulija-*).<sup>20</sup> Five threads<sup>21</sup> play an important role and are connected to a tree with five branches.<sup>22</sup> How this simple piece of information is organized is syntactically very interesting. First we observe the long tail at line iv.15-16 that follows the predicate: 5 *gāpinan* TUR.TUR *pāi* 1 BABBAR 1 GE<sub>6</sub> 1 SA<sub>5</sub> 1 SIG<sub>7</sub>.SIG<sub>7</sub> Û SÍG ZA.GIN. The additional information about the color of the threads is specified after the end of the core clause. Generally this can be explained as an additional non core piece of information.<sup>23</sup> After the action of giving the threads, the text speaks about a tree, a totally new<sup>24</sup> object introduced and described with a couple of nominal sentences: *ta* GIŠ-*ru kattan* 1-EN 5 *alkištāš* = *šiš*, "and one tree is down (t)here, five are its branches". Then the main stream of information goes on again describing the action of hanging the five threads to the five branches of the tree.

Schematically we can represent this section as follows:

Settings: *mān ain wāin pittuliuš* = *ša* LUGAL-*i* MUNUS.LUGAL-*ia* *daškēmi*

Introductory actions: *nu* = *mu* MUNUS.LUGAL 5 *gāpinan* TUR.TUR *etc.*

Introduction of a new participant: *ta* GIŠ-*ru kattan* 1-EN 5 *alkištāš* = *šiš*

Main actions:

- *ta* = *kkan* *gāpinan* *kuwāpit* = *ta* 1-*an* *gāngahḫi*

- 3<sup>?</sup> x[ ]x TUR.TUR 1-EN *šinan* *wilnāš* *šaluinit* x x x-*it-ta* *araummi*

Interruption: introduction of new objects:

- *ḫalkijaš* *ḫaršār* *išḫijanda*

- *zíz<sup>HI.A</sup>-aš* = *ša* *ḫaršār* *išḫijanda*

Main actions, reprisal:

- *kē* = *ššan* *hūmanda* *pattani* *tēḫḫi*

- *n* = *e* LUGAL-*aš* MUNUS.LUGAL-*aš* = *ša* *kitkar* = *šmet* *tēḫḫi*

Final action and descriptive tail

- *šēr* = *a* = *ššan* GAD-*an* *peššiem*

- *š* = *uš* LÚ-*aš* *natta* *aušzi*

We can divide line iv.16 in two clauses:<sup>25</sup> *ta* GIŠ-*ru kattan* 1-EN | 5 *alkištāš* = *šiš*, «and a tree is down there, single/just one, five are its branches (sing. in Hitt.)».

The first clause could also be understood as having 1-EN as the nominal predicate: «the

20 Cf. Otten/Souček 1969, p. 93.

21 On how the five threads magically work, cf. Haas 2003, pp. 664-665.

22 *alkištā(n)-* as *materia magica*, cf. Haas 2003, pp. 366-367.

23 Amplificatory constituents: cf. Luraghi 1990, pp. 21-22. McCone 1979.

24 Judging from the surviving text.

25 Starke 1977, p. 166 provides an alternative analysis.

tree down there is (only) one». In this latter interpretation the two numerals chiastically mark the different description of the tree and its branches and we can understand this specific marked contrast, only one vs. five, as of some relevance for the magical procedures or the expected outcomes.

In the former interpretation, instead, the predicate of the first clause is *kattan*: «there is a tree down there, just one (or: alone)». *kattan* and 5 are followed by some linguistic material that is not the copula.<sup>26</sup>

So according to the one interpretation we have a marked sentence with only one clause having a fronted predicate, in the other we have two clauses with non final predicates. For a better evaluation of the problems involved it may be useful to look at the syntax of numerals.

#### 4. *kattan* 1-*EN*. Syntax of numerals

##### 4.1 Observations on numerals in CTH 416

In the ritual for the royal couple the attested numerals are shown in the following table.

(t.1) Data base for numerals in CTH 416

ONE

line <sup>i</sup>	numeral			head	
	form	position <sup>ii</sup>	case, number, class	word	case, number, class
i.5	1	before (or after under a different analysis, <i>cf. infra</i> )	-	<i>šina-</i>	acc.sg.cm
ii.27	1- <i>EN</i>	before	-	<i>teššumi-</i>	acc.sg.cm
iii.14	1	before	-	UDU	(acc.sg.cm)
iii.25	1	before	-	MÁŠ.GAL-ri	dat.sg
iii.30	1- <i>EN</i>	before	-	<i>zuwāluwal</i>	n/a(O).sg.nt
iii.32	1- <i>EN</i>	before	-	<i>zuwāluwal</i>	n/a(O).sg.nt
iv.15-16	1	proN <sup>iii</sup>	-	scil.: <i>gapina-</i>	acc.sg.cm
iv.18	1- <i>EN</i>	before	-	<i>šina-</i>	acc.sg.c
i.8'	1- <i>EN</i>	after	-	AN.BAR- <i>aš nēpiš</i>	n/a(S).sg.nt
i.8'	1- <i>EN</i>	proN <sup>iv</sup>	-	URUDU- <i>aš = ša</i> (scil.: <i>nēpiš</i> )	scil. n/a(S).sg.nt
iv.17	1- <i>an</i>	after <sup>v</sup>	acc.sg.c	<i>gapina-</i>	acc.sg.cm
2 i.5	1- <i>EN</i> (2x)	proN	-	scil.: <i>lalā-</i>	O
ii.27-28	1- <i>EN</i> (3x)	proN	-	scil.: <i>teššumi-</i>	O
iv.16	1- <i>EN</i>	after <sup>vi</sup>	-	GIŠ-ru	n/a(S).sg.nt
iv.28	1- <i>anta</i>	after	n/a.pl.nt	<i>ḫarpa-</i>	n/a(S).pl.nt

<sup>26</sup> 1-*EN* is considered 'amplificatory', appositional to the subject, in Luraghi 1990, p. 29.

TWO					
2 i.4'	2	before	-	GAL <i>lāla-</i>	nom(or acc?).pl.cm
i.22'	2	before	-	<i>ḥantašepa-</i>	acc.pl.cm
ii.24	2	before	-	ŠUKUR ZABAR	O.sg?
ii.29	2	before	-	ŠUKUR ZABAR <sup>HL.A</sup>	O.pl
ii.35	2	before	-	DUMU <sup>MEŠ</sup> É.GAL	S.pl
iv.36	2	before	-	MUŠEN <sup>partuni-</sup>	acc.pl.cm
THREE					
iv.23	3	before	-	NINDA <i>ḥarši-</i>	nom.pl.cm
FOUR					
ii.22	4- <i>uš</i>	after	acc.pl.c	<i>teššumi-</i>	acc.pl.cm
ii.23	4	before	-	NINDA.KUR <sub>4</sub> .RA- <i>uš</i>	acc.pl.cm
FIVE					
iv.15	5	before	-	<i>gapina-</i>	acc.sg.cm
iv.16	5	before	-	<i>alkištā(n)-</i>	nom.sg.cm
NINE					
iii.34'	9	before	-	<i>muriala-</i>	nom?.sg/pl(B?).cm
i.9'	9- <i>an</i>	after	?	<i>tarma-</i>	nom.sg.cm
TEN					
iii.44	10	before	-	NINDA <i>ḥarši-</i>	acc.sg.cm

<sup>i</sup> Lines refer to composite text in Otten/Souček 1968 (StBoT 8). <sup>ii</sup> 'before' or 'after' refer to the position taken by the numeral, syntactically adjectival, in respect to its head noun. 'proN' indicates that the numeral is used pronominally. <sup>iii</sup> Before adjectives referred to same head noun. <sup>iv</sup> After genitive of same head noun. <sup>v</sup> An adverbial is interposed between head and numeral. <sup>vi</sup> An adverbial is interposed between head and numeral.

## 4.2. Hittite phonetic complements for numerals

In CTH 416, when the numeral is syntactically an adjective, if it follows its head noun it is always marked with a phonetic complement (Akkadian or Hittite). When the numeral occurs as a pronoun, without the head noun expressed within its phrase/clause, it can appear with a complement (mostly Akkadian *-EN*). At line i.5', if analyzed as postponed, and at lines iv.15-16, it appears without (nu-mu MUNUS.LUGAL 5 ga-a-pí-na-an TUR.↑TUR↑ pa-a-i 1 BABBAR 1 ↑GE<sub>6</sub>↑ 1 ↑SA<sub>5</sub>↑ [1] SIG<sub>7</sub>.SI[G<sub>7</sub>] Û 1 SÍG ZA.GIN; the occurrences of the numeral and the adjective can theoretically also be interpreted as nominal sentences).

## 4.3. Number agreement

Singular head nouns with numerals larger than 1 are attested in the ritual starting from the number 5. The nouns are all semantically inanimate, but morphologically part of the *classis communis*. All the occurrences of numerals higher than 4 in the ritual have singular head nouns,<sup>27</sup> while 2, 3 and 4 apparently have plural head nouns. Only at line ii.24 the number 2 is attested with the logogram ŠUKUR ZABAR, without any explicit plural marker.<sup>28</sup> A little farther, at line ii.29 we have 2 ŠUKUR ZABAR<sup>HL.A</sup>.

Looking at a wider corpus it becomes immediately clear that already starting from the numeral '2', number agreement is ancipital. See the following preliminary statistics.

<sup>27</sup> Problematic KBo 17.1 + (StBoT 25 Nr. 3) iii.34, Otten/Souček: m[u]-r[i]-i[a-l]i<sup>2</sup>-, perhaps nom.pl.; Neu: mu-r[i-i]a-x-[]

<sup>28</sup> Only attested in exemplar KBo 17.6 (StBoT 25, Nr. 6) ii.4'.

(t.2) Number agreement with numeral 2 in StBoT 25.<sup>29</sup>  
(counting tokens)

tot.used	sg	pl	%sg	%pl
52	25	27	48,1	51,9

It seems that we can exclude that this phenomenon is connected to the hypothesis that numbers larger than 4 were not inflected;<sup>30</sup> moreover GrammHitt, §9.23 has already reported some plural head nouns with numbers larger than 4: «8 <sup>TUG</sup>išhīmanēš neyanteš 'eight i.-garments (are) turned'»; «āššu IGI.ĪIA=KA lāk LĪM laplippuš kar(a)p 'turn (hither) your benevolent eyes; lift (your) thousand eyelashes' KBo 7.28 obv. 11 (OH/MS) (and compare possibly 1 SIG<sub>7</sub> l[aplipuš = tuš kar(a)p] 'lift your ten thousand eyelids' KBo 27.18:4)».

In the Old Hittite Ritual texts collected by Neu 1980 (StBoT 25), other numerals can also appear with the head noun in the plural. In this case, generally, the head noun is logographically written and more often the head noun is (semantically) animate.

At first impression it seems that animate head nouns are almost always coherently marked for plural (typically LÚ or MUNUS<sup>MEŠ</sup> or, to a lesser extent, UDU<sup>ĪIA</sup>), while (semantic) inanimates occur sometimes with, sometimes without a plural marker. I have, at the present state of the research only partial data about a possible distribution along animacy lines for the instances of singular vs. plural head nouns.<sup>31</sup>

Some comparative issues may be of help: «The MP [Middle Persian] cardinal numerals tend to occur in the singular. The Phl [Pahlavi] texts are most consistent. In them numerals are singular. The substantive modified, if it is an inanimate referent, is singular [...] if it designates an animate referent, it may be singular [...] or plural».<sup>32</sup>

In Hittite the situation seems at first to be a little different but along the same lines: apparently we have both singular and plural for inanimates and consistently plural agreement for animates.

In Modern Persian nouns following the cardinals are by rule singular. Still, «in the case of living beings and concrete things a classifier is normally inserted between the numeral and the noun».<sup>33</sup> So again we find a split along animacy/definiteness lines.

Old and Modern Armenian have rather complicated systems. For Old Armenian we can see a different behavior when the numeral is 2, 3 or 4, or when it is 5 or higher. The form of the noun will also strongly depend on the reciprocal position with the numeral.<sup>34</sup>

Num - N	N - Num
2-4 pl	pl
5- sg/pl(obl)	pl

In Modern West Armenian «the Noun after a Cardinal Number is in the Singular if it is

29 Syllabographic and logographic evidence was not distinguished. Measure and 'classifier' constructions were not considered; other examples in broken context were also not considered. More in Rizza (forth.).

30 This would somehow imply a gradual acquisition of noun/head properties at the expenses of adjectival/dependent ones. Cf. Corbett 1978, 1993.

31 A first attempt to organize a larger corpus of data has been presented at the Sodalizio Glottologico Milanese, 13<sup>th</sup> of June 2011, with the title "Sulla sintassi dei numerali in eteo" and will be hopefully published in English in the forthcoming volume «Atti del Sodalizio Glottologico Milanese» 6 n.s. (2012). I will refer to this paper as Rizza (forth.).

32 Brunner 1977, p. 45

33 Boyle 1966, p. 63.

34 Meillet 1913, p. 86; Mann 1968, p. 119; Jensen 1959, pp. 162-163.



indefinite, it is in Plural, if it is definite».<sup>35</sup>

More than genetic, typological issues are here of primal interest. I only cite here Greenberg 1978 generalization n. 43: «Where there is rule-governed variation between the use of the singular and plural with numerals, the use of the singular is favored with higher numbers, in measure constructions, in indefinite constructions, and with nouns which are inanimate or impersonal».<sup>36</sup>

More typological issues have been considered in another work.<sup>37</sup>

I wonder if there is some, at least statistical, coherence when considering, in (Old) Hittite the animacy/definiteness hierarchy:

Human < non human animate < inanimate  
most probably plural < most probably singular

Here I can only offer the preliminary results obtained looking at the corpus in E. Neu's *Althethitische Ritualtexte in Umschrift* (StBoT25) for the first decade. The details, and possibly new results, will be given in future contributions.<sup>38</sup>

The data were organized selecting only cardinal adjectives<sup>39</sup> and dividing them according to the writing system evidence of the numbered nouns: logographic vs. syllabographic. A logogram determined by a phonetic complement revealing the grammatical form of the noun is treated under syllabographic evidence. Derived \-nt\ numerals were not considered.<sup>40</sup> Also measure construction were not considered.<sup>41</sup>

The more interesting evidence comes from the common gender class. The neuter class can be ambiguous since a collective case can play a role and the inflection sometimes does not offer a complete distinction in number. The collective case may work as a 'general' number.<sup>42</sup> General nominals in system with [general - [singular - plural]] oppositions can trigger singular number agreement in predicates, as is the case with (all?) Hittite neuters.

This first survey confirms the hypothesis that the distribution of the choice of number agreement with numerals is based on animacy/definiteness, but more research is needed.

In addition to animacy, the semantic ability to refer to classes/types/mass, especially for cattle or nouns such as the various kind of NINDA seems to be relevant.

Another interesting evidence that need to be confirmed against a larger corpus, is that, at least with the inflected numerals (2-4), agreement might be determined by the grammatical class (apparently including <sup>NINDA</sup>-nouns).

Overall, combining logographic and syllabographic evidence, this is the initial tentative hierarchy that I can offer ('+' marks the usage of plural forms).

(t.3)

humans	animals (cm, individual)	animals (cm, individual and class), inanimates (cm)	'neuter animates' (vegetables)	inanimates (nt), collec- tive/abstracts (nt)
+	+	+, -	-	-

35 Kogian 1949, p. 54. But see more in Sigler 1993. More on the comparison between Armenian and Hittite in Rizza (forth).

36 Greenberg 1978, p. 283.

37 Rizza (forth.).

38 Cf. Rizza (forth.).

39 I.e. only numerals not working like pronouns, but attested together with a noun.

40 Cf. Melchert 2000; GrammHitt §9.26-37.

41 Apparently measure construction use the singular of both measure and measured. More in Rizza (forth).

42 Corbett 1991, pp. 9-19.

The common gender inanimate nouns tend to show up in the plural with the inflected numerals and in the singular with the noninflected ones.

#### 4.4. Word order

GrammHitt §9.41 states: «Numbers precede their head nouns. Exceptions are appositional:  $n = ašta$  <sup>URU</sup>*Hattušaš* = *pat URU-ri 1-aš āšta*, 'Hattuša the city alone (lit., as one) remained (loyal)'. What is interesting here is that all the examples of appositional numerals in GrammHitt show the numeral 1. Cf. §9.41: «Note that all examples above are the number 'one', but it is not said that only "one" can be appositional, nor is it stated that other numbers can be so.

We have in CTH 416 six (perhaps seven) occurrences of noun - numeral order: 4 (perhaps 5, out of 11) for 'one' (i.5<sup>?</sup>, i.8', iv.17, iv.16, iv.28); 1 (out of 2) for 'four' (ii.22) and 1 (out of 2) for 'nine' (i.9'). Within these six occurrences two need special attention: 1-*anta* at line iv.28 and 9-*an* at line i.9'.

1-*anta* at line iv.28 has already been explained as an instance of numbering sets in Melchert 2000 and GrammHitt §9.29: «<sup>GIŠ</sup>*harpa* = *ma 1-anta LUGAL-aš GÌR = ši kitta MUNUS*. *LUGAL-š = a 1-anta kitta* 'As for wood-piles, one (set of unspecified number in the set) lies at the foot of the king, and one (at that) of the queen'. When counting sets, Hittite uses a form of the numeral derived by means of the suffix \-ant-\.<sup>43</sup> The head noun is either semantically collective or formally marked as neuter plural. As Melchert 2000, pp. 59-61 notes, there is a difference between the form of the numeral inflected as \-nt-\ neuter collective (-*ant-a*) and the forms inflected as singular \-nt-\ neuter (-*an*). As it has been well defined in GrammHitt §9.32, the neuter plural form of the numeral indicates the number of sets, not the number of the individual objects that may be contained in the set. The neuter plural form can also appear, disguised in akkado-graphic form, as numeral followed by *TAPAL* (in instances larger than 'one' ) or 1-*NŪTUM*.<sup>44</sup> On the other hand, the neuter singular \-nt-\ of the numeral counts the objects contained *in each* set.<sup>45</sup> Another particular example of noun - numeral order in CTH 416 is:

#### (2) KBo 17.1 + i.7'-10'

7'

... ḫu-ur-ti-ia-li-ma

8'

[AN.B]AR-aš ne-e-pí-iš 1-EN ki-it-ta URUDU-aš-ša 1-EN ki-it-ta

9'

[(<sup>1</sup>tar<sup>1</sup>-m)]a-aš-ša-an 9-an an-da-an ki-it-ta ta LUGAL-i MUNUS.LUGAL-ia

10'

[(ki-i)]š-ša-an me-e-ma-aḫ- ḫi

7'

... ḫurtijal-i = ma  
ḫur.-sg.d/1 = CONN

8'

AN.BAR-aš

nēpiš

1-EN

ki-tta

URUDU-aš = ša

1-EN ki-tta

iron-sg.gen

sky.sg.nt.n/a

one

lie-md.prs.3.sg

copper-sg.gen = CONN

-

-

9'

tarma-š = šan<sup>46</sup>

9-an

andan ki-tta

nail-sg.nom = prtcl<sup>47</sup>

nine-?

there

-

ta

LUGAL-i

MUNUS.LUGAL = ja

CONN

king-sg.d/1

queen = CONN

10'

kiššan

mēma-ḫḫi

so

speak-prs.1.sg

<sup>43</sup> Melchert 2000, pp. 59-60; GrammHitt §9.26-9.37.

<sup>44</sup> Cf. Neu 1992.

<sup>45</sup> Cf. examples in GrammHitt §9.30-9.37.

<sup>46</sup> Traditional analysis. Cf. *infra*.

<sup>47</sup> This is the traditional analysis. Hereafter I will suggest to interpret *tar-ma-aš-ša-an* not as *tarmaš*(nom.sg) = *šan*, but as *tarma*(collective) = *ššan*.



... in the *hurtijali*- lies one iron sky, also one copper (sky) lies, 9 nails lie in there. And I speak to the king and the queen as follows

9-*an* is of great interest because the phonetic complement /an/ may reveal the Hittite reading of the cardinal 'nine' < PIE \*h<sub>1</sub>néuŋ. In light of Melchert 2000 and GrammHitt §9.26-37, this hypothesis should definitely be refused for the following reasons. First, in the ritual and in StBoT 25 a phonetic complement is always grammatically significant. Second, a derived \-nt-\ stem seems to fit the context better. However, if we take 9-*an* to be the nom./acc. sg. of the derived \-nt-\ form, this instance is construed with a nominative singular (*tarmaš*), and it would contradict the rule of gender agreement for derived \-nt-\ numerals.<sup>48</sup> This rule reveals itself to be problematic even within the examples offered in GrammHitt, cf. e.g. §9.31: «EGIR-*anda* = *ma taknaš* <sup>D</sup>UTU-i 1 UDU GE<sub>6</sub> 2 UDU BABBAR 9-*an* UDU-un *tekan paddānzi nu* = *kan* UDU.ḪI.A *kattanta šippandanzi* 'But afterward for the Sungoddess of the Netherworld one black sheep, two white sheep, and a group of nine sheep--they dig (a hole in) the ground and sacrifice the sheep down in it' KBo11.10 ii 17-19. Note here how [...] 9-*an* and the singular (collective) head noun UDU-un point to a closed group of nine sheep separate from the enumerated single black sheep and two white ones». The analysis is certainly correct, but it remains to be explained what UDU-un formally is.<sup>49</sup> If it is an accusative singular common gender (perhaps < PIE \*pekú-<sup>50</sup>), then agreement with the derived \nt\ numeral need not to be exclusively formal, but can also be 'semantic'. Be that as it may, *tarmaš* = *šan* can also be interpreted differently. The traditional interpretation sees in *tarmaš* = *šan* the nom. sg. common gender noun *tarma*- and the particle \ = *šan* \.<sup>51</sup> Formally it could also be genitive singular, but the alternative that I want to put forward here is to consider it a collective: *tarm-a* = *ššan*. The use of the collective ending \-a\ is well attested for common gender nouns from Old Hittite times: *tarma*- could be added to the list already offered in Melchert 2000, pp. 62-64.<sup>52</sup>

Just before 9-*an* in i.9', we have two instances of the postponed numeral 'one' (i.8'). Basically, all the numerals in KBo 17.1 + i.7'-10' are postponed. The explanation as 'appositional' must here be taken critically. It is difficult to understand «in the *hurtijala*- there is the silver sky alone ...» etc. It seems easier to take the position of the numeral as a consequence of the fronting of the head nouns. AN.BAR-*aš* *nēpiš*, URUDU-*aš* = *ša* and *tarma* = *ššan* seem to be reciprocally contrastive and informationally parallel elements. The same can be said for <sup>GIŠ</sup>*harpa* = *ma* at line iv.28, where the particle \ = *ma* \ specifically marks the introduction of a new participant giving it the status of a topic in a sub-section of text:

48 Cf. GrammHitt §9.28: «The endings on the -*ant*- stem agree in gender and case with the counted collective noun, showing a neuter form either when marking a formally singular but semantically collective noun (e.g. *pahhur* or *hapeššar*) or when modifying a marked neuter plural head noun».

49 We have UDU-*uš* as nominative opposing UDU-un accusative. Unfortunately the Hittite stem is not patent. There should be at least three stems: one \-u\ stem and one \-i\ stem (*hawi*-, cf. HW<sup>2</sup>, s.v.). A third stem is *ijant*- (cf. HEG, s.v., with references).

50 Reconstructed as neuter, it appears also as masculine in Old Indian and Avestan, Cf. IEW, s.v. '2. *pek*-. AiW, s.v. 'pasav-': «j., g. **pasav**- : fšav- m. 'Vieh, domestiziertes vierfüßiges Tier, Haustier', Sing. auch koll.».

51 For all: Otten/Souček 1968; Neu 1983; EDHIL. On the other hand HEG, s.v. *tarma*- does not explicitly call this form singular.

52 Taking *ta-ar-ma-aš-ša-an* as *tarmaš* = (j)ša = *an*, *tarma*- = conn = particle '-an' seems not to be a viable alternative. We expect the particle \ = *šan* \ to appear together with the verb *ki*- and the adverb *andan*, not \ = *an* \. Cf. Otten/Souček 1968, pp. 84-85 (-*šan*), pp. 81-82 (-*an*); Josephson 1972, pp. 200-204 (-*šan* ... *ki*).

## (3) KBo 17.3 + iv.24-26 (StBoT 8 iv.27-29)

24	... ú-ga	ḥa-a-aḥ-ha-al	ḥar-mi	ši-i-na-an-na	ḥar-mi
25	<sup>GIŠ</sup> ḥar-pa-ma	1-an-ta	LUGAL-aš	GÌR-ši	ki-it-ta MUNUS.LUGAL-ša 1-an-ta
26	ki-it-ta	ta si-i-ni	te-e-mi	...	
24	... uk = a	ḥāḥḥal	ḥar-mi	šina-n = na	ḥar-mi
	I = CONN	ḥāḥḥal.nt.n/a	hold-prs.1.sg	figure-sg.acc = CONN	-
25	<sup>GIŠ</sup> ḥarpa = ma	1-ant-a	LUGAL-aš	GÌR = ši	
	ḥarpa.nt.n/a <sup>53</sup> = CONN	1-der-nt.pl.n/a	king-sg.gen	foot = poss.3.sg.d/1	
	ki-tta	MUNUS.LUGAL = ša	1-anta		
	lie-mp.prs.3.sg	queen = CONN	-		
26	ki-tta ta	šin-i	tē-mi	...	
	- CONN	figure-sg.d/1	speak-prs.1.sg		

... And I hold a *ḥāḥḥal*, and I also hold a figure. (Considering) *ḥarpa*-, one (portion/set *vel sim.*) lies at the foot of the king, another one lies at (the foot of) the queen. And I say to the figure ...

We are left now with the instances of noun-numeral at lines (composite text): iv.17, iv.16, ii.22 and i.5' (uncertain).<sup>54</sup> These occurrences seem to be overall more problematic. Let's start with *teššumiuš* 4-uš at line ii.22:<sup>55</sup>

(4) StBoT 8 ii.20-23<sup>56</sup>

20	... ú-ga	ú-i[(l-na <sup>l</sup> )-aš	ER(ÍN <sup>MEŠ</sup> -an	i-ia-mi)]
21	na-aš-ša-an	<sup>NINDA</sup> šar-ru-wa-an-ti	x[-š(a-aš)]	
22	te-eš-su-um-mi-uš	4-uš	tar-li[p(i- <sup>l</sup> it šu-u-wa <sup>l</sup> -mu-uš	i-ia-mi)]
23	4	NINDA.KUR <sub>4</sub> .RA-uš	EM-ŠÚ-TIM	i- <sup>l</sup> e <sup>l</sup> -[m(i) ...
20	... uk = a	wiln-aš	ERÍN <sup>MEŠ</sup> -an	ija-mi
	... I = CONN	clay-sg.gen	combat unit-sg.acc	make-prs.1.sg
21	n = a(n) = šan	<sup>NINDA</sup> šar-ru-wa-an-ti	x[-š(a-aš)]	
	CONN = proN.3.sg.acc = prctl	š.-bread-sg.d/1		
22	teššummi-uš	4-uš	tarlip-it	šūwa-muš ija-mi
	cup-pl.acc	4-pl.acc	tarlipa-instr	full-pl.acc -
23	4	NINDA.KUR <sub>4</sub> .RA-uš	EMŠÚTIM	ie-mi
	4	NKR-bread-pl.acc	sour	make-prs.1.sg

... and I make a combat unit of clay and (I will xx?) it on/to the *šarr*-.bread, I make [ ... ] 4 cups filled with *tarlipa*-. I make 4 sour NKR.-breads

Unfortunately the lacuna at line ii.21 makes it difficult to understand why *teššumi*- shows up here before the numeral. Is this an occurrence of an appositional numeral or again a fronted head noun? At first sight there seems to be no particular reason for a fronting of *teššumi*- here, but it is also unclear what the semantic property of an appositional 4-uš would be, unless we tentatively try to analyze this as: «I take cups (that are) 4 (and) filled with *tarlipa*-», with a predicative 4-uš.

<sup>53</sup> Cf. Neu 1983 (StBoT 26), s.v., p. 56, n. 263a. In GrammHitt § 9.29 *ḥarpa*- is described as having an «overt collective ending -a». *ḥarpa*- shows both *classis communis* accusative plural *ḥarpuš* and the collective plural in \-a\.

<sup>54</sup> Cf. *infra*..

<sup>55</sup> HittGramm cites the example ii.22 *teššummiuš* 4-uš at §9.23, when discussing agreement in number with non-collectives, but it does not mention it in §9.41, when treating word order in counting.

<sup>56</sup> Composite texts of KBo 17.1 +, KBo 17.3 + and KBo 17.6.

At the present stage of my research I would consider this explanation the easiest, but I would not forget an alternative that would explain the linear ordering of the elements differently. *teššummiuš 4-uš tarlipit šūwamuš* is built with three phrases: the head *teššumi-*, the modifier '4' and the modifier '*tarlipit šūwamuš*'; the latter is a heavy modifier. If we resort to Behaghel's law (Gesetz der wachsenden Glieder), between any two phrases, one lighter, shorter, the other heavier, longer, the latter would appear after the former. Theoretically, if we reconstruct the sequence with all the modifiers to the left of the head we would have, according to Behaghel's law: *\*4-uš tarlipit šūwamuš teššummiuš*. Although it is just speculation, perhaps the movement of *teššummiuš* to the left of the numeral maintains an immediate proximity between noun and numeral and allows the heavier constituent to follow the lighter.

In our interpretation, a true appositional numeral can be seen in i.5'-6': [3]-iš GUD-un 1 ši-i-na-an-na al-la-ap-pa-aḫ-ḫi MUNUS.LUGAL-aš-ša-an 3-iš [al-]la-ap-pa-aḫ-ḫi, translated by Otten/Souček 1968: «Der König bespuckt [drei]mal das Rind und die eine Figur, auch die Königin bespuckt sie (Sg.!) dreimal». In a footnote (p. 19, n. 5) the authors add: «Mit dieser Übersetzung wird das Zahlzeichen I des Textes wiedergegeben; logisch nicht ganz klar». Due to the position of the connective \=ja\ in *šinan=na*, the text could also be interpreted like this: «The king spits [three] times on the GUD alone (or: at first) and (then) to the *šina-*, the queen spits as well». GUD-un and *šinan* are here considered dimensional accusatives, not direct objects and \=an\ in MUNUS.LUGAL-aš(š)=an as the particle \=an\ anaphorically resuming the direction or the goal of the action.

Moving now to lines iv.16-17, we finally meet again the sentence which initiated the discussion in §3.2 of the present paper. Here are again lines iv.16-17: 1 SIG<sub>7</sub>.SIG<sub>7</sub> Û SÍG ZA.GIN ta GIŠ-ru kattan 1-EN 5 alkištāš = šiš ta = kkan gāpinan kuwāpit = ta 1-an gāngahḫi (for the complete section cf. §3.2 above). 1-EN and 1-an have inverted position and are separated from the nouns to which they refer.

We start with 1-an. As already described in §3.2, the action of hanging the threads is one of the main actions in this section of the ritual. The threads were introduced at line iv.15 where we find out that they are five, each of a different color. At line iv.16 however, we have an interruption in the stream of the information in order to introduce another participant that is relevant for the ritual action: the tree (GIŠ-ru). A short description of it follows (line iv.16). Then the text proceeds to tell how the priest handles the threads. For this reason, i.e. to refocus the information on the threads, we may have the fronting of *gāpinan*.

So far the inverted position of the numerals could be explained either as having predicative function (ii.22, 4-uš; i.5', '1')<sup>57</sup> or as a consequence of the fronting of the noun to which they refer (i.8'-9', 1-EN (2x), 9-an; iv.28, 1-anta; iv.17', 1-an).

#### 4.5 Interpretation of GIŠ-ru kattan 1-EN (iv.16)<sup>58</sup>

There are, at first sight, several different possible interpretations of line iv.16 *ta GIŠ-ru kattan 1-EN 5 alkištāš = šiš*. I will try to go through them in the following.

GIŠ-ru is with no doubt the subject.

kattan is either:

- (i)- an adverb with deictic and/or anaphorical force (hereby, down here, close to the same space implied or mentioned before). As such it is expected neither to be final, nor to intervene between the numeral and its head, unless the numeral is the main predicate;
- (ii)- the main predicate.<sup>59</sup> As such it is expected to be in final position.

<sup>57</sup> Only a tentative solution.

<sup>58</sup> It should be noted that Starke 1977, p. 166 gives a totally different interpretation from that of Otten/Souček 1968.

<sup>59</sup> Starke 1977, p. 166; Cotticelli Kurras 1991, pp. 42-50, part. 48-49; Francia 2002, p. 34.

1-EN is either:

(a)- an amplificatory constituent, post-final, predicative apposition of the subject;<sup>60</sup>  
 (b)- an attribute to GIŠ-*ru*, left behind by the fronting of its head noun, or specifically postponed for pragmatic/stylistic reasons, a sort of *chiasmus*: *ta* GIŠ-*ru* *kattan* 1-EN 5 *alkištāš* = *šiš*.

(c)- the main predicate, in final position;

The alternatives (a) and (b) should agree with (ii); (c) with either (i) or (ii).

#### 4.5.1. First option: 1-EN as amplificatory constituent, (a), (ii)

The idea that 1-EN functions here as an amplificatory constituent, in apposition to the subject, has been expressed in Luraghi 1990, p. 29. The structure of the sentence would be quite simple: after the predicate in final position, an element is added, let's say in a post-final position. This position is typical for elements that represent non core pieces of information. 1-EN appears instead to be central, core information, thus other possibilities should be investigated.<sup>61</sup>

1-EN has also been considered an amplificatory apposition in Starke 1977, but in a different way. In the interpretation given in Starke 1977, p. 166, *ta* GIŠ-*ru* *kattan* 1-EN 5 *alkištāš* = *šiš* is a single sentence, where 1-EN 5 *alkištāš* = *šiš* are considered to be in post-final position, «[...] also in exponierter Stellung zur betonenden Hervorhebung»,<sup>62</sup> and are all apposition to each other: «Daraus folgt, daß GIŠ-*ru* 1-EN und 5 *alkištāš* = *šiš* zueinander in Apposition stehen [...]».<sup>63</sup> Here is the translation in Starke 1977, p. 166: «Und fünf Äste eines einzigen Baumes (sind) unten». We can thus analyze the interpretation in Starke 1977 as an instance of amplified sentence where the position of the constituents are not problematic. I personally am not convinced by this analysis. An appositional 1-EN does not need to occur in an amplified sentence, separated from its noun,<sup>64</sup> but it could possibly do so.<sup>65</sup> However, 5 *alkištāš* = *šiš* are, in my opinion, hardly understandable as amplified sentence constituents, because, as already said above, it seems to me that the numerical relation of 1 tree to 5 branches is highly relevant for the ritual action.

#### 4.5.2. Second option: fronting of GIŠ-*ru*, *kattan*, (b)-(ii)

As for the position of 1-EN taken as an attribute, we said that a possible explanation for its position after the head noun could be the fronting of the head noun itself. We already noticed that GIŠ-*ru* here is a totally new participant and, even if we lack the particle \ = *ma* \, it seems reasonable to consider it as the topic of a subsection of the text or the new informational focus. However, as long as it is also the grammatical subject, it is difficult to uncover here a fronting operation. To get to our sentence we must explain not only why 1-EN comes after, but also why *kattan* shows up between noun and numeral. We should imagine, from an underlying \**ta* 1 GIŠ-*ru* *kattan*, where *kattan* is the main predicate, the fronting of *kattan*, \**ta* *kattan* 1 GIŠ-*ru* and then the fronting of GIŠ-*ru*. The latter could be tentatively explained in similar lines to the fronting of an accusative object like KBo 3.34 i.22 *nu ešhar* LUGUL-uš

60 So Luraghi 1990 p. 29; Partially also Starke 1977, p. 166.

61 GrammHitt §30.9 offers evidence for predicatives, appositions to the subject or the direct object, in post-final position.

62 Starke 1977, p. 166.

63 *Ibidem*.

64 Cf. KBo 4.14 ii.11 (sjh) URU *Alatarme* = *za* = *kan* ŪL 1-aš EGIR-an *ešun*, "In Alatar mi was I not behind alone?" Here the appositional numeral appears before the place word (from Cotticelli Kurras 1991, p. 46).

65 Split-phrases with one part in amplification, e.g.: KBo 17.1 + i.22' 2 *hantašepuš harwani* GI[(Š-aš)]. The *genitivus materiae* GIŠ-aš is here post-final, separated from *hantašepuš*. Cf. Luraghi 1990, pp. 21-22.



*aušta*.<sup>66</sup> In other words the subject *GIŠ-ru* here would be first<sup>67</sup> as is typical for a subject, but in a position structurally higher than that of the grammatical subject.<sup>68</sup> This explanation has the advantage of providing for a parallel structure, at lines iv.16-17, for the two *foci*<sup>69</sup> of the information: *GIŠ-ru* and *gapina-*. However, I have neither an explanation for the position of *kattan* nor a reason for its fronting:<sup>70</sup> why should we not expect *\*ta GIŠ-ru 1-EN kattan*?

#### 4.5.3 Third option: 1-EN as predicative, (c)-(i/ii).

In order to explain 1-EN in the last position we can also try to see if it can be considered a nominal predicate. The picture is complicated by the fact that *kattan* can either be taken to be a predicate or an adverb, putting forward two sub-options. The first would be something like «there is a tree hereby (in the sense of 'some sort of tree'), it is one, five are its branches». This interpretation seems to be rather complicated. In fact, we would have two sentences: 'there is a tree' and 'the tree is one'. The major difficulty I find in this interpretation is the absence of an enclitic subject together with 1-EN, the presence of which seems to be required by other, albeit later, examples of nominal sentences with an equi-NP subject.<sup>71</sup>

We could also understand it like this: «A tree hereby is alone», where *GIŠ-ru* is subject, *kattan* adverb, and 1-EN the nominal predicate. In this case all the constituents would be in their expected position.

Another interpretation would be to have 1-EN as a predicative extension: «there is a tree hereby alone/isolated/just one (perhaps in the sense of 'not surrounded by any other trees')». We already discussed the interpretation given in Starke 1977, p. 166, and in Luraghi 1990, p. 29, where 1-EN is considered appositional.

#### 4.5.4. A fourth option?

Let us imagine the sentence with *kattan* as predicate in final position. 1-EN has always been interpreted as referring to *GIŠ-ru*. I make here a very tentative proposal: can it be referring to '5', meaning something like 'only'? «A tree is hereby, only five are its branches».

#### 4.5.5 Conclusions about *GIŠ-ru kattan 1-EN*

The syntactically simplest solution is «A tree hereby/down (here) is single/alone», with 1-EN as nominal predicate, *kattan* as adverb with deictic and/or anaphoric function, and *GIŠ-ru* as subject. Alternatively we can also try to consider here the co-occurrence of multiple factors: fronting of *GIŠ-ru*, appositional 1-EN but in final position for stylistic reasons and *kattan* as predicate. I generally prefer the simplest solution, but in this case I also see the

66 "Palace chronicles", ed. Dardano 1997; cf. Luraghi 1990, pp. 91 (ex. 3001, p. 90); GrammHitt §30.9.

67 In the sense of Luraghi 1990, p. 13: «the position of the first accented word which is preceded only by an accented connective and possible clitics»; pp. 80-90.

68 I am thinking at a structural configuration in the lines of the one described in the paper by M. Vai in this volume (Vai 2011).

69 As said just *supra*, I am not totally convinced that *GIŠ-ru* is to be analyzed better as informational focus than topic; nonetheless, considering that it is a totally new participant and that it is introduced quasi *ex-abrupto*, I think that a function like *focus* is appropriate.

70 A possible solution has been suggested by M. Vai, in terms of his organization of the left periphery in Hittite (see his article in this volume): *GIŠ-ru* is in TopP, *kattan* in FocP, 1-EN remains behind. I would nonetheless prefer, contextually, to interpret *GIŠ-ru* as focus.

71 Possible Old Hittite examples: HHT 75 (Bo 4767, StBoT 25.105) 5: *n = e kiššarta*, "and they are with/in the hand", cf. Starke 1977, p. 94. New Hittite: KUB 14.29 (AM) i.30: *n = aš = mu kattan ēšta* "and he was with me"; KUB 3.19 + Vs.12: *ṁAziraš = ma AN[A PANI ABI = ja GIM-(an ēšta ammuq = qa = aš píran QATAMMA-pát ēšta* "In the same way as Aziru was in front of my father, exactly (= pát) so was he in front of myself" (Treaty between Mursili II and Tuppi-Tesub of Amurru, ed. del Monte 1986). More examples in Cotticelli Kurras 1991, *passim*.

reasons for a more complicated picture.

## 5. 5 *alkištāš* = *šiš*

This is a problematic clause. I understand it as having *alkištāš* as the subject and 5 as the predicate.<sup>72</sup>

Generally, non verbal predicates are last in the clause. In what follows a new hypothesis will be discussed in order to understand the fronting of the predicate '5' as an identificational (or contrastive) focus. The definition of identificational/contrastive focus is grounded on Kiss 1998. In our analysis the sense of the sentence should be, roughly: the branches are 5 (neither more nor less) so I can hang one thread each. This would be interesting because it is the content of the predication that is focused, and not one of the discourse participants directly (in our example, being a nominal sentence, there is only one participant, *alkištā(n)-*). Focalized predicates, especially when they are claimed to be identificational, are somehow problematic.

If we try to assimilate nominal predicate fronting to verbal predicate fronting we also have to consider that certain verb frontings have a different meaning with regard to information structure.

Luraghi 1990, pp. 96-97, states that verbal predicates in "initial" position are connected to background information, side remarks, extra information: like in our text, the ritual KBo 17.1 + i.22', 2 <sup>DINGIR</sup>*Ḫantašepuš ḫarwani GIŠ-aš ḫarkanzi = ma(=an)*<sup>73</sup> <sup>DINGIR</sup>*Ḫantašepes antuḫšaš ḫaršar = ra* <sup>GIŠ</sup>*ŠUKUR*<sup>HLA</sup> = *ja*, "we hold 2 *ḫantašepa-* (made of) wood, they hold, the *ḫantašepa-*, human heads and spears".

The clause with the verb in initial position (*ḫarkanzi = ma(=an)*) introduces additional information about a participant of the preceding sentence (*ḫantašepa-*); such information is not part of the main stream (foreground) of information, rather it is a side remark. What we learn from i.22', is not directly relevant to the ritual actions performed and described in this context.

Other examples of initial verbs, however, seem problematic for this interpretation. In the same ritual, KBo 17.1 + i.27' *taruweni = ma = at ešḫar*, has, in my view, no backgrounding, side remark function, rather it is part of the main ritual actions performed (but I am aware that such reading might ultimately depend on my interpretation of the context).<sup>74</sup> Perhaps the position of the predicate is fronted for reasons which are not pragmatic: we have to note that *ešḫar* is not substantival here, but predicative,<sup>75</sup> and for reasons that I am not able to explain now, *taruweni* might have been preferred to be raised to host the clitics. The connective clitic \=ma\ may itself play a role in selecting *taruweni* instead of *ešḫar*, perhaps due to the predicative function of *ešḫar*. As we will soon see, predicate raising may be associated to focalized participants. In pointing out that *ešḫar* is not referential, but predicative, a number of questions as how can a predicate be focalized are raised. It may be that *ešḫar* here is somehow emphatic, but in what sense? As it will be explained later, *ešḫar* does not seem to share the properties for being labelled as identificational focus. There is no reason to interpret *ešḫar* as stating that something is named 'blood' and not in some other possible

72 Cf. *etiam* Otten/Souček 1969; Luraghi 1990, p. 29; Cotticelli Kurras 1992, p. 114. *Contra* Starke 1977, p. 166.

73 If we should read here a sign -an- or not, and, in case, what would be the function of it, will not be discussed in this article.

74 Compare, contrary to what here said, Luraghi 1990, pp. 51-52, where this sentence is explicitly listed as an example of «clause that contain digressions, such as secondary descriptions, side remarks, etc. [...] In (403i) [scil. *taruweni = ma = at ešḫar*] the clause contains a side remark of the type that one could add in parentheses».

75 On verb fronting in double accusative construction with *taru-*, *tarkummāi-*, *ḫalzešša-*, cf. already Holland 1980, p. 41-42, 62-64.

way, ways that are given in the context or in the situation, a property that is essential for an identificational focus, as it is defined in Kiss 1998. The sentence does not seem to mean «we name it blood (not X nor Y)» where X and Y stand for any contextually or situationally given alternatives. Perhaps *ešhar* represents a non presupposed, new piece of information that need a specific emphasis. A nonpresupposed new piece of information is called 'information focus'. An information focus may receive some emphasis, but usually this emphasis is realized by pitch accents and does not necessarily involve syntactic movement.<sup>76</sup> It would be interesting to check against the Hittite documentation if there is evidence for an emphatic realization of the information focus that is realized with some syntactic reordering. The analysis of *tarweni* = *ma* = *at ešhar* demands more research and will not be further discussed here. I only add that *tarweni* can also be considered emphatic (this could be justified by the magical relevance of the utterance here described). Emphasis is another function connected with predicate fronting. This was clearly restated in Luraghi 1990, pp. 94-100.<sup>77</sup> A predicate in initial position can be emphatic (pp. 94-96) or connected to adversativity (pp. 96-99). In the latter situation it is typically associated with the particle \ = *ma* \ and introduces either textual discontinuity or 'external' discontinuity. In the first case they are «digressions [...] and contain additional, or backgrounded information».<sup>78</sup> In the second case they describe «unexpected, or in some way exceptional, events».<sup>79</sup> In Luraghi 1990, p. 30 we also find a very interesting connection between predicate movement and predicate constituent weight: «[...] Predicates appear to be divided into two groups according to their 'weight', i.e. their internal categorial complexity; in this respect, light Predicates are those which consist of only one word, whereas heavy Predicates consist of two [*scil.*: periphrastic forms, Predicates with copula]. Light Predicates appear to be more flexible as to their position; heavy Predicates are, so to speak, less easy to move around in the sentence.» If we combine this observation with the so-called Behaghel's law(s),<sup>80</sup> we may interpret the predicate fronting in sentences introduced by \ = *ma* \, \ = *a* \ as triggered for at least two reasons:

1) being the lightest constituent in the sentence, it is targeted for raising in order to host \ = *ma* \;

2) the raising of the predicate can also avoid the fronting of an NP when there are no pragmatic reasons to do so.

In other words, initial predicates, especially co-occurring with \ = *ma* \, may be raised for syntactic reasons due to their relative weight and/or to avoid the raising of elements that would be interpreted as fronted with some pragmatic force not appropriate in the context.

In the example cited above, i.e. KBo 17.1 + i.22'-23' *ḫarkanzi* = *ma*( = *an*)<sup>DINGIR</sup> *ḫantašepeš antuḫšaš ḫaršār* = *ra*<sup>GIŠ</sup> *SUKUR*<sup>HI.A</sup>, the predicate is lighter than the direct object (being a simpler constituent). Moreover, I suspect that *ḫantašepeš* is here either an informational gloss<sup>81</sup> or an identificational focus, inserted to state the identity of the participant working as the

76 Kiss 1998.

77 Cf. *etiam* Holland 1980, p. 37, and in general ch. II, with references.

78 Luraghi 1990, p. 97.

79 Luraghi 1990, p. 98.

80 I am referring not only to the 'Gesetz der wachsenden Glieder', but also to relative informational relevance of the constituents. Thus we will refer to 'weight' as a quality that concerns phonological length, constituent complexity and informational relevance.

81 Compare this sentence with KBo 17.1 + i.6': *partaunit* = *uš* LUGAL-*un* MUNUS.LUGAL-*an* = *na* *ašaškizzi*, "with a wing/feather (*partaun-it*, ablative) he makes them, the king and the queen, take place". LUGAL-*un* MUNUS.LUGAL-*an* = *na* simply recall the identity of \ = *uš* \ to avoid a possible uncertainty. Here we have a clear clitic doubling construction, while with *ḫarkanzi* = *ma*( = *an*) no pronominal clitic is present. But the appearance of a clitic subject pronoun is impossible as transitive subject do not allow pronominal clitic resumption in Hittite. On clitic doubling constructions, see now Sideltsev 2010, Sideltsev (to appear).

subject, as long as the verbal third plural person allows an impersonal interpretation.<sup>82</sup> Interestingly, the immediately following sentences show 1) an O-V pattern, and 2) again a V = ma-O order: (i.24'-25') *šakuwa = šmet išhaškanta wēššanta = ma išharwantuš TÚG<sup>HLA</sup>* "their eyes are bloodstained, they wear blood-red clothes".<sup>83</sup> In the first case there is no \ = ma\ to be hosted. The second shows again verb fronting and I wonder if this can be understood as the raising of the lightest element to host \ = ma\, thus avoiding the topicalization of the direct object (that could result in having *išharwantuš TÚG<sup>HLA</sup>* hosting \ = ma\). Luraghi 1990, p. 98 notes, however, that the clauses with initial verbs carry the same subject, but the intervening one with the canonical word order has a different grammatical subject, while maintaining the same topic.

The idea that a V1 pattern marks the following constituent as a focus has been recently introduced in the discussion on Hittite predicate syntax in Bauer 2011. The configuration Topic-Comment is taken as basis. An 'initial' or 'first' predicate<sup>84</sup> fills an empty Topic position so that what follows, in Comment position, can receive a focalized interpretation. The verb is defined in such cases as a "dummy-topic".<sup>85</sup> Within a theoretical approach that describes word order in terms of movement, we would speak of predicate raising. Almost all the examples cited in Bauer 2011 have a Wackernagel second position clitic demanding the raising of a constituent to receive a host;<sup>86</sup> the lighter constituent would be the favorite candidate.<sup>87</sup> Only one example provided in Bauer 2011, ex. (11), has no clitics to host, KBo 3.34 i.23: «*paimi nāwi | uḫḫi nāwi* 'Ich bin noch nicht gegangen, ich habe noch nicht gesehen'». <sup>88</sup> It is not clear to me if this situation is somehow special because of the negation. If the need for a host to clitics is not the force triggering predicate raising, then we are left only with a pure need for word order for pragmatic reasons and the instances where we also have clitics do not contradict this basic hypothesis. In addition to Bauer 2011, so far as a movement theory is followed, one has to consider that the raising of the predicate is, in situations like the ones treated in Bauer 2011, a trick, so to say, to avoid an inappropriate interpretation of a nominal constituent in terms of information structure.

Now, to go back to the clause '5 *alkištāš = šiš*', it should be clear that neither the back-grounding function, nor the 'dummy-topic' one can describe here the predicate - subject order. The sequence numeral - noun is not marked in normal 'attributive' constructions, but when the numeral is the predicate, it is expected to be last in the clause, with exception of the copula.<sup>89</sup> So 5 *alkištāš = šiš*, even if it has the regular numeral - noun order, is indeed a marked situation, as concerns the linear ordering of the sentence constituents. The information that is here marked is the fact that the tree has exactly five branches. The fact that it has branches is implicit; what is not given is the fact that they are five. And the number

82 *ḫarkanzi* in initial position can also be considered an example of 'tail-head linking': the preceding sentence has already introduced *ḫar(k)*- 'to hold'. So the first and the second sentence share the same predicate, but the subject and the object are different and what is said in the second sentence regards one of the participants (direct object) of the preceding one. The position of *ḫarkanzi* can also be interpreted as 'dummy-topic' in the terms of Bauer 2011, with *ḫantašepeš* as informational or contrastive focus. As a matter of facts, the third plural predicate allows, as already remembered, an impersonal reading, and it can also refer to somebody that was introduced earlier in the ritual or is given in the situation. My claim here is that we have an alternative possible identification for the subject of *ḫarkanzi* that allows the interpretation of *ḫantašepeš* as focus. On this text section cf. also Vai 2011 (this volume).

83 Cf. Luraghi 1990, pp. 97-98.

84 The distinction made in Luraghi 1990 is not kept in Bauer 2011.

85 Cf. Bauer 2011, p. 45 with reference to Dik 1995.

86 Cf. Bauer 2011, ex. (9), (10), (12), (13), (14).

87 As already stated, we consider weight as a rather broad quality involving phonological shape, constituent complexity, informational relevance.

88 Bauer 2011, p. 44.

89 Cf. GrammHitt §30.28.



of the threads to be hanged on those branches is also five. I exclude that the fronting of the predicate '5' has something to do with the predicate raising operation described before. '5' cannot be a 'dummy-topic' here, implying that *alkištāš* = *šiš* is focalized. It really seems that '5' is the identificational/contrastive focus: just five, not any other number. Any other number can in fact be an alternative to '5'. This situation is to a certain extent similar to the interpretation of initial predicates as emphatic,<sup>90</sup> but it should better be kept distinct. Obviously there is an emphasis on '5', but it is of a particular kind. In my interpretation this is an identificational focus, preceding the subject, and it cannot be taken to represent the topic. As long as the definition of identificational focus presupposed in this article is the one given in Kiss 1998,<sup>91</sup> it is important to stress that that definition is applied here problematically. This is the definition of identificational focus given in Kiss 1998:

«(1) The function of identificational focus: An identificational focus represents a subset of the set of contextually or situationally given elements for which the predicate phrase can potentially hold; it is identified as the exhaustive subset of this set for which the predicate phrase actually holds».<sup>92</sup>

In order to verify that the notion of identificational focus can correctly describe '5', we would have to check if '5' is the exhaustive subset for which the predicate phrase holds. Unfortunately the predicate phrase is '5' itself.

In order to better treat this problem let us first have a look at the following examples:

(5) (Italian)

- |  |                               |
|--|-------------------------------|
| a. Gianni è il capitano                | (John is the captain)         |
| b. Il capitano è Gianni                | (The captain is John)         |
| c. È il capitano, Gianni <sup>93</sup> | (?he/?it's the captain, John) |

Of the three utterances listed in a.-c., only c. may explicitly allow, in Italian, an interpretation that presupposes that being the captain is the correct alternative among others, which are not so. "È il capitano, Gianni" can be appropriately used to mean, e.g.,: "John is the captain (he is not the second official nor the cook, provided that 'second official' and 'cook' are alternatives given in the context or in the situation)".

On the basis of this Italian example, I will adopt here a definition of identificational/contrastive focus that is broader than the one given in Kiss 1998 and explicitly allows predicate phrases to be focused with features such as [exhaustivity] and [contrastivity].<sup>94</sup> Note that the Italian example (5)c. shows the fronting of the entire copular phrase "è il capitano", not just the noun of the predicate 'il capitano', like (5)b., that represent the so-called inverse copular sentence. The raising of 'il capitano' in (5)b. cannot be understood as an identificational focus.<sup>95</sup>

90 Luraghi 1990, pp. 94-96.

91 I have to make explicit that, in addition to Kiss 1998, other works constitute the background for the definition of focus and other notions of information structure used in this article: Krifka 2008; Féry/Krifka 2008; Benincà 2001; Benincà/Poletto 2004 among others.

92 Kiss 1998, p. 245, 249.

93 N.B.: "è il capitano Gianni", without a comma, i.e. without 'Gianni' as separate intonation unit (possibly an anti-topic, cf. Féry/Krifka 2008, p. 8) means "he is captain John".

94 On these features, cf. *infra*.

95 Rather, Gianni is the information focus. The difference between a canonical copular sentence like (5)a. and its inverse counterpart (5)b. may be that (5)a. takes the grammatical subject and the nominal predicate respectively as topic and comment, while the reverse, nominal predicate as topic and grammatical subject as comment, is true in the inverse alternative. In Kiss 1998, p. 248 it is stated that «the identificational focus extends over the full DP [...]. An identificational focus can never be a subconstituent; [...]». This implies that a pitch accent may not be enough to mark a phrase as identificational focus. As a matter of facts, an iden-

In the light of what just said, 5 *alkištāš* = *šiš* is here interpreted as "sono cinque, i suoi rami" ('they are five, its branches). '5' is thus taken to be the entire copular phrase (with a phonologically null copular operator), not just the predicative numeral.<sup>96</sup> If '5' was further highlighted with tone or pitch accent is something that we cannot possibly confirm.<sup>97</sup>

To corroborate our hypothesis we should also try to see if the features that are typical for an identificational/contrastive focus can be recovered in our text. The features referred to are [exhaustivity] and [contrastivity].<sup>98</sup>

In terms of Kiss 1998, a focus with an exhaustive interpretation identify a subset A of the set  $\Sigma$  as the true alternative among other subsets of  $\Sigma$ . When a focus has a contrastive interpretation «the identification of a subset of the given set also identifies the contrasting complementary subsets».<sup>99</sup> In Kiss 1998 the feature content of the identificational focus are considered to be subject to parametric variation among languages. Hungarian and English are listed as [+exhaustive,  $\pm$ contrastive]; Rumanian, Italian, Catalan, Greek, Arabic as [+exhaustive, +contrastive]; Finnish [+contrastive,  $\pm$ exhaustive].<sup>100</sup>

Retrieving the exact general nature of identificational focus in Hittite is at present too difficult, at least for the writer, to be undertaken. Nonetheless we can offer few remarks.

'5' in 5 *alkištāš* = *šiš* is [+exhaustive], in fact only the number 5 is identify as true within the given set. As already said, when speaking about 'trees' we implicitly add to our common ground of knowledge 'branches', because 'branch' is a constitutive element of the entity 'tree'; a tree has a certain number of branches, so the given set  $\Sigma$  in question here, is the set of the natural numbers ( $\mathbb{N}$ ). Now, under common communicative circumstances, a given tree in a specific point in time and space should not have, at the same time, 5 and 4, or 5 and 7, or any other number of branches. 5 is [+exhaustive]. In addition to the exhaustive interpretation I think '5' has here also the contrastive interpretation. In other words, it is my opinion that 5 *alkištāš* = *šiš* implies and identifies three alternatives. Any tree has a number  $n$  of branches; for this tree the variable  $n$  could be instantiated by:  $n_1$ ;  $n_2$ , with  $n_2 < n_1$ ;  $n_3$ , with  $n_3 > n_1$ . The interpretation here given to the fronting of '5' is that '5' means: the branches can be any number, but here they are five, and it is specifically stressed that they are neither less nor more than five.<sup>101</sup>

Should the reading of 5 *alkištāš* = *šiš* be confirmed as correct, then we will have to consider it as evidence for a position over the (grammatical) subject that can host fronted elements with the specific function of identificational/contrastive focus.<sup>102</sup> This position does not require, as expected, a resumption in the core sentence, as is instead the case with hanging topics (*nominativi pendentes*). As long as we have to account also for a list topic (contrastive topic) position and another, possibly even lower, topic position for fronted non subject constituents, the Hittite left periphery would be extended even more, up to at least four positions. For a better analysis in terms of the cartographic project, please refer to the article by M. Vai in this volume.

tificational focus most usually derives from movement within the scope of a phonologically explicit or null operator. Cf. Kiss 1998. On canonical vs. inverse copular sentences, cf. Moro 1993, 1997, 2005.

96 The consequences of this analysis go far beyond the aims of this article. The problems connected to copular vs. nominal sentences in Hittite and other Ancient Near Eastern languages will be treated elsewhere.

97 I am aware, however, of the fact that a particular intonation or a stronger stress might have been necessary for the interpretation here given.

98 Cf. Kiss 1998, *passim*, pp. 267-272.

99 Kiss 1998, p. 267.

100 Kiss 1998, pp. 267-271.

101 The simple nominal sentence \**alkištāš* = *šiš* 5 would already be exhaustive. For this reason I suspect that the fronting adds the contrastive interpretation.

102 This position is not necessarily reserved to this type of focus operation. Other typologies of focusing could also be relevant here. M. Vai and the writer reached this observation working together for this volume.

## 6. Conclusions

In this article I tried to account for some syntactic phenomena of the ritual for the royal couple CTH 416, which are somehow problematic. The linear ordering of the nominal predicates and that of the numerals were treated here together for obvious reasons.

The numeral precedes its head noun. When it follows, this can happen for at least three reasons: 1. the numeral is appositional; 2. the numeral is the main (nominal) predicate; 3. the head noun is fronted leaving behind the numeral.

The nominal predicate is followed only by the copula. When it is followed by some material that is not the copula, this can happen for at least two reasons: 1. the sentence is enlarged with amplificatory constituents; 2. (a) the predicate is raised to host clitics or to avoid a wrong pragmatic interpretation of other constituents or (b) it is fronted, *i.e.* it is focalized. One specific focus operation involved in fronting might be an identificational/contrastive focus. This last operation would be structurally peculiar in demanding the movement of the entire copular phrase. That is to say that 2. (a) and 2. (b) might be structurally different: the first case could be equal to inverse copular sentences (with raising of the predicative nominal without the copular operator), the second could be equal to identificational focus fronting (with raising of the copular phrase).

It is self evident that some of the conclusions here reached are left as provisional and demand future studies.

The principal aim of this work was to put forward the many problems connected with the syntax of predicates and that of numerals, trying to suggest some possible solutions. As it often happens, when we try to answer one question, more are raised.

Alfredo Rizza  
Alexander von Humboldt Scholar  
alfredo.rizza@gmail.com

## Bibliographical references

- AiW = Bartholomae, C., *Altiranisches Wörterbuch*, Strassburg: Trübner, 1904.
- Archi, A.,  
2003, *Middle Hittite - "Middle Kingdom"*, in Beckman, G./Beal, R./McMahon G. (ed.), *Hittite Studies in Honor of Harry A. Hoffner Jr. on the occasion of His 65th birthday*, Winona Lake, Indiana: Eisenbrauns, 2003, pp. 1-12.  
2005, *Remarks on the Early Empire Documents*, in «Altorientalische Forschungen» 32/2 (2005), pp. 225-229.
- Bauer, A.  
2011, *Verberststellung im Hethitischen*, in Krisch, T./Lindner, T. (ed.), *Indogermanistik und Linguistik im Dialog. Akten der XIII. Fachtagung der Indogermanischen Gesellschaft vom 21. bis 27. September 2008 in Salzburg*, Wiesbaden: Reichert, 2011, pp. 39-48.
- Behaghel, O.  
1909, *Beziehungen zwischen Umfang und Reihenfolge von Satzgliedern*, «Indogermanische Forschungen» 25 (1909), pp. 110-142.
- Benincà, P.  
2001, *The Position of Topic and Focus in the left periphery*, in Cinque, G./Salvi, G. (ed.), *Current Studies in Italian Syntax offered to Lorenzo Renzi*, Amsterdam: Elsevier- North Holland Academic Graphics, 2001, pp. 39-64.
- Benincà, P./Poletto, C.  
2004, *Topic, Focus and V2: defining the CP sublayer*, in Rizzi, L. (ed.), *The Structure of CP and IP*, Oxford - New York: Oxford University Press, pp. 52-75.
- Boyle, J. A.  
1966, *Grammar of Modern Persian* (Porta Linguarum Orientalium, n.s. 9), Wiesbaden: Harrassowitz, 1966.
- Brunner, Ch. J.  
1977, *A syntax of Western Middle Iranian* (Persian Studies Series, 3), Delmar, New York: Caravan, 1977.
- Corbett, G. G.  
1978, *Universals in the syntax of cardinal numerals*, in «Lingua» 46 (1978), pp. 355-368.  
1991, *Number* (Cambridge textbooks in linguistics), Cambridge - New York: Cambridge University Press, 1991.  
1993, *The head of Russian numeral expressions*, in Corbett, G. G./Fraser, N. M./McGlashan, S. (ed.), *Heads in grammatical theory*, Cambridge: Cambridge University Press, 1993, pp. 11-35.
- Cotticelli Kurras, P.  
1991, *Das hethitische Verbum 'sein'. Syntaktische Untersuchungen* (Texte der Hethiter 18), Heidelberg: Winter, 1991.  
1992, *Die hethitischen Nominalsätze*, in Carruba, O. (ed.), *Per una grammatica ittita. Towards a Hittite grammar* (Studia Mediterranea 7), Pavia: Iuculano, 1992, pp. 99-135.
- CTH = Laroche, E., *Catalogue des textes hittites*, Paris: Klincksieck, 1971.
- Dardano, P.  
1997, *L'aneddoto e il racconto in età antico-hittita: la cosiddetta "cronca di palazzo"* (Biblioteca di ricerche linguistiche e filologiche 43), Roma: Il calamo, 1997.
- del Monte, G. F.  
1986, *Il trattato fra Muršili II di Ḫattuša e Niqmepa' di Ugarit* (Orientis antiqui collectio 18), Roma: Istituto per l'Oriente C. A. Nallino, Centro per le antichità e la storia dell'arte del Vicino Oriente, 1986.
- Dik, H.  
1995, *Word order in Ancient Greek: a pragmatic account of word order variation in Herodotus*, Amsterdam, 1995.
- EDHIL = Kloekhorst, A., *Etymological dictionary of the Hittite inherited lexicon* (Leiden Indo-European Etymological dictionary series 5), Leiden - Boston: Brill, 2008.
- Féry, C./Krifka, M.

- 2008, *Information structure: notional distinctions, ways of expression*, in van Sterkenburg, P. (ed.), *Unity and diversity of languages*, Amsterdam: Benjamins, 2008, pp. 123-136.
- Francia, R.  
2002, *Le funzioni sintattiche degli elementi avverbiali di luogo ittiti* (Studia asiana 1), Roma: Herder, 2002.
- GrammHitt = Hoffner, H. A./Melchert, H. C., *A grammar of the Hittite language* (The languages of the Ancient Near East 1), Winona Lake: Eisenbrauns 2008.
- Greenberg, J. H.  
1978, *Generalizations about numeral systems*, in Greenberg, J. H. (ed.), *Universals of human language*, Vol. 3. *Word structure*, Stanford: Stanford University press, 1978, pp. 249-295.
- Haas, V.  
2003, *Materia magica et medica hethitica. Ein Beitrag zur Heilkunde im Alten Orient* (unter Mitwirkung von D. Bawanypeck), Berlin - New York: de Gruyter, 2003.
- HED = Puhvel, J., *Hittite Etymological Dictionary*, Berlin - New York - Amsterdam, de Gruyter, 1984-.
- HEG = Tischler, J., *Hethitisches Etymologisches Glossar* (Innsbrucker Beiträge zur Sprachwissenschaft 20), Innsbruck: Innsbrucker Beiträge zur Sprachwissenschaft, 1983-.
- Holland, G.  
1980, *Problems of word order change in selected Indo-european languages*, PhD diss., University of California, Berkeley, 1980.
- Holland, G./Rizza, A.  
(to appear), *Notes on Catalogue des textes hittites 416*, m.s. 2010.
- Hoffner, H. A. Jr, Melchert, H. C.  
HW<sup>2</sup> = Friedrich, J. et al. (ed.), *Hethitisches Wörterbuch. Zweite, völlig neubearbeitete Auflage auf der Grundlage der edierten hethitischen Texte*, Heidelberg: Winter, 1975-.
- IEW = Pokorny, J., *Indogermanisches etymologisches Wörterbuch*, Bern - München: Francke, 1958.
- Jensen, H.,  
1959, *Altarmenische Grammatik* (Indogermanische Bibliothek), Heidelberg: Winter, 1959.
- Josephson, F.  
1972, *The function of the sentence particles in Old and Middle Hittite* (Studia Indoeuropea Upsaliensia 2), Uppsala: Skriv, 1972.
- KBo = *Keilschrifttexte aus Boghazköi*, Leipzig – Berlin, Mann 1916-.
- Kiss, K. É.  
1998, *Identificational Focus versus Information Focus*, in «Language» 74/2 (1998), pp. 245-273.
- Kogian, Fr. S. L.  
1949, *Armenian Grammar (West dialect)*, Vienna: Mechitharist Press, 1949.
- Košak, S.  
hethiter.net/:hethkonk, *Konkordanz der hethitischen Keilschrifttafeln*, Hethitologie Portal Mainz, @ <http://www.hethport.uni-wuerzburg.de/HPM/hethportlinks.html>
- Krifka, M.  
2008, *Basic notions of Information Structure*, in «Acta Linguistica Hungarica» 55 (2008), pp. 243-276.
- KUB = *Keilschrifturkunden aus Boghazköi*, Berlin, Akademie 1921-.
- Luraghi, S.  
1990, *Old Hittite Sentence Structure*, London: Routledge, 1990.
- Mann, S. E.  
1968, *An Armenian historical grammar in Latin characters*, London: Luzac & Company, 1968.
- Marazzi, M.  
2010, *Fenomeni interlinguistici e interscrittori nella più antica documentazione hittita: qualche riflessione e alcune precisazioni di carattere linguistico-storico*, in «Orientalia N.S.» 79/2 (2010), pp. 184-206.
- McCone, K. R.  
1979, *The diachronic possibilities of the Indo-European 'amplified' sentence: a case history from Anatolian*, in Brogyani, B. (ed.), *Festschrift for Oswald Szemerényi on the occasion of his 65th*



- Birthday* (Current issues in linguistic theory 11), Amsterdam: Benjamins, 1979, pp. 467-487.
- Meillet, A.  
1913, *Altarmenisches Elementarbuch* (Indogermanische Bibliothek), Heidelberg: Winter, 1913.
- Melchert, H. C.  
2000, *Tocharian Plurals in -nt- and related phenomena*, in «Tocharian and Indo-European Studies» 9 (2000), pp. 53-71.
- 2008, *Middle Hittite revisited*, in «Studi Micenei ed Egeo-Anatolici» 50/II (2009) [= VI Congresso Internazionale di Ittitologia. Roma, 5-9 settembre 2005], pp. 525-532.
- Moro, A.  
1993, *I predicati nominali e la struttura della frase* (Rivista di Grammatica Generativa Monografie), Padova: Unipress, 1993.
- 1997, *The Raising of Predicates: Predicative Noun Phrases and the Theory of Clause Structure* (Cambridge Studies in Linguistics), Cambridge - New York: Cambridge University Press, 1997.
- 2005, *Copular sentences*, in Everaert, M./van Riemsdijk, H. (ed.), *The Blackwell Companion to Syntax*, Blackwell Publishing, 2005, vol II. chpt. 18.
- Neu, E.  
1980, *Althethitische Ritualtexte in Umschrift* (Studien zu den Boğazköy-Texten 25), Wiesbaden: Harrassowitz, 1980.
- 1983, *Glossar zu den althethitischen Ritualtexten* (Studien zu den Boğazköy-Texten 26), Wiesbaden: Harrassowitz, 1983.
- 1992, Zum Kollektivum im Hethitischen, in Carruba, O. (ed.), *Per una grammatica ittita. Towards a Hittite grammar* (Studia Mediterranea 7), Pavia: Iuculano, 1992, pp. 197-212.
- Otten, H./Souček, V.  
1969, *Ein althethitisches Ritual für das Königspaar* (Studien zu den Boğazköy-Texten 8), Wiesbaden: Harrassowitz, 1969.
- Popko, M.  
2007, *Althethitisch? Zu den Datierungsfragen in der Hethitologie*, in Groddek, D., Zorman, M. (ed.), *Tabularia Hethaeorum. Hethitologische Beiträge Silvin Košak zum 65. Geburtstag* (Dresdner Beiträge zur Hethitologie 25), Wiesbaden: Harrassowitz, 2007, pp. 575-581.
- Rieken, E.  
2011, *Verberststellung in hethitischen Übersetzungstexten*, in Krisch, T., Lindner, T. (ed.), *Indogermanistik und Linguistik im Dialog. Akten der XIII. Fachtagung der Indogermanischen Gesellschaft vom 21. bis 27. September 2008 in Salzburg*, Wiesbaden: Reichert, 2011, pp. 498-507.
- Rizza, A.  
(forth.), *On the syntax of numerals in Hittite*, forthcoming in «Atti del Sodalizio Glottologico Milanese» 6 n.s. (2012).
- Sigler, M.  
1993, *Number agreement and specificity in Armenian*, in Canakis, C. P./Chan, G. P./Marshall Denton, J. (ed.), *CLS 28. Papers from the 28th Regional Meeting of the Chicago Linguistic Society 1992. Vol. 1: the main session*, Chicago Linguistic Society, 1993, pp. 499-514.
- Sideltsev, A. V.  
2010, *Proleptic Pronouns in Middle Hittite*, in Kogan, L. et al. (ed.), *Language in the Ancient Near East. Proceedings of the 53e Rencontre Assyriologique Internationale*, Vol. 1, part 1 (Babel und Bibel 4/1), Winona Lake: Eisenbrauns, 2010, pp. 211-248.
- (to appear), *NP dislocations and clitic doubling in Hittite*. Ms. 2009/2010.
- Starke, F.  
1977, *Die Funktion der dimensionalem Kasus und Adverbien im Althethitischen* (Studien zu den Boğazköy-Texten 23), Wiesbaden: Harrassowitz, 1977.
- StBoT = Studien zu den Boğazköy-Texten.
- Vai, M.  
2011, *Osservazioni sulla periferia sinistra della frase in ittita*, in Barbera et al., *Anatolistica, Indoeuropeistica e oltre nelle memorie dei seminari offerti da Onofrio Carruba (anni 1997-2002) e al Medesimo presentate*, 2011 (this volume).

van den Hout, Th. P. J.

2009a, *Reflections on the origins and development of the Hittite tablet collections in Hattuša and their consequences for the rise of Hittite literacy*, in Pecchioli Daddi, F., Torri, G., Corti, C. (ed.), *Central-north Anatolian in the Hittite period. New perspectives in the light of recent research. Acts of the International Conference held at the University of Florence (7-9 February 2007)* (Studia Asiana 5), Roma: Herder, 2009, pp. 71-96.

2009b, *A century of Hittite text dating and the origins of the Hittite cuneiform script*, «Incontri Linguistici» 32 (2009), pp. 11-35.

Wilhelm, G.

2005, *Zur Datierung der ältesten hethitischen Landschenkungsurkunden*, in «Altorientalische Forschungen» 32/2 (2005), pp. 272-279.











PRINTED IN EURASIA

IN AUGUST 2011

BY STATUS S.R.L.,  
VIA PALEOCAPA 67R, GENOVA

ON BEHALF OF

QU.A.S.A.R. S.R.L.,  
MILANO