

# Digging for data: a formal-semantic and propositional logical approach to focus in Hittite

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## 1. Roadmap of today

- 1.1 Topic overview: explain how a formal semantic approach to Focus combined with some propositional logic can help find the Information Structure of a clause in a dead language. This is a work in progress.
- 1.2 Why do we need this: the dead give-away of Focus (and Contrastive Topic) is (often) the prosodic peak of the clause. However, sentence stress is usually not accessible in dead languages, and certainly not in Hittite.
- 1.3 Definitions of Focus, general formal manifestations of Focus, and functional categories of Focus.
- 1.4 Overview of Focus in Hittite
- 1.5 Presentation of problematic Focus categories
- 1.6 Proposed solution using formal semantics and propositional logic as tools.
- 1.7 How further?

## 2. Focus in general

- 2.1 Preliminaries: I use Functional Discourse Grammar and the layered structure of the discourse act. **No trees!** Focus belongs to the Interpersonal Level (Rhetorics, Pragmatics, Information Structure). General references: DIK 1997, HENGEVELD & MACKENZIE 2008.

### 2.2 Definitions:

“The focus of a proposition is that element of a pragmatically structured proposition which makes the utterance of the sentence expressing the proposition **into a piece of information**. It is the balance remaining when one subtracts the presupposed component from a given assertion. [...] Like the topic, the focus is an element which stands in a pragmatically construed relation to a proposition. But while the pragmatic relation between a topic and a proposition is assumed to be predictable or recoverable, the relation between the focus element and the proposition is assumed to **be unpredictable or non-recoverable for the addressee** at the time of the utterance” (LAMBRECHT 1994: 217-218). As a result “a constituent in focus can by definition **not be omitted** without depriving the utterance of some or all of its information value.” (LAMBRECHT 1994: 224)

“The Focus function signals the Speaker's strategic selection of **new information**, e.g. in order to **fill a gap** in the Addressee's information, or **to correct** the Addressee's information. The Focus function is assigned only in those cases in which this is linguistically relevant, i.e. when languages use linguistic means to indicate that some part of a Linguistic Expression constitutes the relevant new information. The information not assigned the Focus function constitutes the **Background**.” (HENGEVELD & MACKENZIE 2008: 89)

## 2.3 General formal manifestations of Focus (DIK 1997: 313)

- (i) adaptation of the form
- (ii) the presence of a Focus marker (e.g., a particle)
- (iii) unusual position in the sequence of constituents
- (iv) a special Focus construction
- (v) a special prosodic contour (e.g., tonic accentuation)

## 2.4 Functional categories (DIK 1997: 332-334):

Focus function	A says:	B answers:
Replacing	John bought apples.	He did <b>not</b> buy APPLES, he bought BANANAS ( <b>instead</b> ).
Additive	John bought apples.	He did <b>not</b> only buy APPLES, he <b>also</b> bought BANANAS.
Restricting	John bought apples and bananas	He <b>only</b> bought APPLES.
Selecting	Would you like coffee or tea?	(I would like) COFFEE, please
Information	What would you like to drink?	(I would like to drink) COFFEE, please

## 2.5 Focus can have different scopes (LAMBRECHT 1994: 223):

Focus scope	Type of clause	Example
Sentence Focus	Event reporting (thetic)	What happened? — J'ai ma VOITURE qui est en PANNE.
Predicate Focus	Topic-comment	What happened to your car? — (Ma voiture) elle est en PANNE
Argument Focus	Identificational	I heard your motorcycle broke down? — C'est ma VOITURE qui est en panne.

Note: predicate focus structures are unmarked for information structure, meaning that this structure is also compatible with other pragmatic construals (LAMBRECHT 1994: 226-228).

Assuming that all combinations are possible, we might be facing  $4 \times 5 \times 3 = 60$  different contexts for focus (assuming form, function and scope are independent factors, which they most likely are not).

## 3. Focus in Hittite

3.1 Preliminaries: Understanding which elements are in Focus, or a Topic, is very important for linguistic theory, but also for correctly understanding texts. But how do we *know* that something is a Topic or a Focus, especially in a dead language? I have explored this for Hittite (2009a, 2009b, 2013, 2014), heavily relying on the concepts *focus skeleton* and *focus anaphoricity* (for these notions see Mats Rooth in general).

### 3.2 Focus skeleton, focus anaphoricity:

(1) S: Where is John going?

A: (John is going) to the MARKET.      focus skeleton = John is going x, resumes antecedent 'John is going'.

A clause with a Focus contains a Focus skeleton (see Rooth 2007: 59), which is that part of the clause that is pragmatically presupposed<sup>1</sup>. In the answer to the question “Where is John going?”, the **pragmatic presupposition** or **Focus skeleton** is the open proposition “John is going *x*”, with *x* as a locative phrase. For a Focus to be felicitous in the context, the Focus skeleton should match the question by matching the variable *x* to the *wh*-word in “Where is John going?” and by being anaphoric. We can use the requirement that the focus skeleton has to be anaphoric also in contexts without questions. This is very useful for dead languages, because it will give us the Focus! (But there will not always be a focus skeleton).

### 3.3 Replacing Focus (not X, but Y) in Hittite.

(2) If a palace attendant of the lowest rank comes out,

<i>n=an=ši</i>	LÚ.ŠUKUR.GUŠKIN	<i>ŪL</i>	<i>pāi</i>
CONN=it=to.him	man.spear.gold	not	he.gives

the gold-spear-man does not give it (the key) to him.

When a high-ranking palace attendant comes out— either a commander-of-10 or an army-bailiff (or) a [gu]ard comes—

<i>nu</i>	GI	<i>apēdani<sub>F</sub></i>	<i>pianzi</i>
CONN	key	that.one:DAT.S	they.give

they give the key to *him<sub>F</sub>* instead.<sup>2</sup> (IBoT 1.36 i 20-21 (MH/MS instruction, CTH 262))

### 3.4 Additive Focus (X, also Y).

(3)

<i>nu</i>	LÚ.MEŠ	<i>šalašhuš</i>	<sup>14</sup> <i>mān</i>	<i>UNUT MUNUS.LUGAL</i>	<i>pēran</i>	<i>šekanzi</i>
CONN	groom:NOM.PL.C	like	tool	queen	before	they.know

The groom-like persons know about the queen’s equipment in advance,

and they keep taking possession of them.

Also, I, the queen, have now made some *huppiyalla*-cloth-like things.

<sup>18</sup> <i>nu=wa</i>	<i>apē=ya<sub>F</sub></i>	LÚ.MEŠ	<i>šalašhuš</i>	<i>šekanzi</i>
CONN=QUOT	those:ACC.PL.N=too	groom:NOM.PL.C	they.know	

The grooms will know about *those too<sub>F</sub>*,

and they will take possession of them. (KUB 31.77 ii 13-19 (CTH 584, NH))

<sup>1</sup> The partition of a clause in a Focus and Presupposition (the Focus skeleton) and the contextual or conceptual availability of a presuppositional set that yields a true proposition if substituted for the semantic variable in the Focus skeleton, go back to JACKENDOFF 1972: 245ff.

<sup>2</sup> This example shows that the Focus skeleton is not necessarily completely identical to its antecedent. The subject of the Focus skeleton is an unspecified third person plural whereas the subject of the antecedent clause is the gold-spear-man. One would not like to reject *n=an=ši* LÚ ŠUKUR.GUŠKIN *ŪL* *pāi* as the antecedent solely because of this difference.

### 3.5 Restricting Focus (not X and Y, only X).

- (4) The one who has carried out also that matter of Danuḫeba, he *too* has already become a god. He stepped down from the road,

<sup>15</sup>*n=at*                      *IŠTU SAG.DU=ŠU*                      *karū*                      *parā*                      *šarnikta*  
CONN=it                      with head=his                      already                      forth                      he.compensated

and **he** already fully compensated for it with his head.

Sungoddess of Arinna, my lady, do not drag up again the affair of Danuḫeba against me and the land of Ḫatti during my days: it is not right to drag up again such a thing **against me** during my days!

The one who has carried out the matter of Danuḫeba,

<sup>22</sup>*parā=y=at*                      *karū*                      *apāš=pat<sub>F</sub>*                      *šarnikta*  
forth=it                      already                      that.one=only                      he.compensated

he already paid fully, and it should have been **only him<sub>F</sub>** (lit. **only he** already paid fully)! (KUB 21.19 + KBo 52.17 ii 12-22 (NH prayer, CTH 383))

### 3.6 Selecting Focus (X or Y? X!).

- (5) Each year I will make one year and twelve months of silver (and) gold, [...]

*n=aš ANA DINGIR-LIM peškiuwan teḫḫi*  
and I will give them to the deity.

Which wish the Moon God has,

*nu ITU.KAM.ḪI.A ŠA KÙ.BABBAR GUŠKIN apēdani* <sup>15</sup> *peškimi mān* <sup>URU</sup> *Urikina* <sup>16</sup> *mān imma kuwapi*

I will give the months of silver (and) gold according to that (wish), either (in) Urikina or anywhere else. (KUB 15.3 i 11-16 (NH vow, CTH 584))

The antecedent of the focus skeleton “I will give months of silver and gold” is found in line 13 (*n=aš ANA DINGIR-LIM peškiuwan teḫḫi*), and the disjunctive set that represents the locations where the Moon God might wish to receive his gifts is expressed as *mān ... mān*.

### 3.7 Relation between type of pragmatic function and position in the clause.

Type of focus	Position in the clause
Contrastive focus:	
Replacing/selecting focus	Preverbal
Restricting focus (marked by <i>-pat</i> ‘only’)	Preverbal/pattern position
Additive focus (marked by <i>-ya</i> ‘even’)	Preverbal
Non-contrastive focus:	
Additive focus (marked by <i>-ya</i> ‘also’)	Initial/First

#### 4. Problems

Identifying selecting focus in Hittite is far more difficult than identifying replacing, additive, or restricting focus. The reason is that both elements that are needed for identification, the set from which to choose and the pragmatic presupposition or focus skeleton, are either absent or merely implied in the preceding discourse. And how do we know whether (6) is not a case of New/Information Focus?

- (6)
- |           |              |                                 |              |           |              |              |
|-----------|--------------|---------------------------------|--------------|-----------|--------------|--------------|
| <i>nu</i> | <i>kuit</i>  | <sup>13'</sup> LUGAL- <i>uš</i> | <i>tezzi</i> | <i>nu</i> | <i>apāt</i>  | <i>iyami</i> |
| CONN      | what:ACC.S.N | king-NOM.S.C                    | he.says      | CONN      | that:ACC.S.N | I.do         |
- Whatever the king says, that I will do (and nothing else). (KBo 17.4 ii 12'-13' (OS ritual, CTH 416.1))

For example, why does *apāt* not simply provide the answer to the following question: ‘What will I do?’ — That (*apāt*) which the king says’? And how do we approach clauses without independent pronouns?

Intuitively, adding ‘and nothing else’ makes sense, but this is quite subjective. We should postpone our subjective judgment as long as possible.

#### 5. A New Approach

5.1 I propose a new approach, inspired by formal semantic approaches to focus. The representation of Restricting Focus provided by Krifka (1992: 19) is:

“**only**( $\langle \alpha, \beta \rangle$ ) : $\leftrightarrow \alpha(\beta) \ \& \ X[X \approx \beta \ \& \ \alpha(X) \rightarrow X = \beta]$ , where  $X$  is a variable of the type  $\beta$ .  
 $\alpha$  = an open proposition with a variable  $X$ ,  $\beta$  = value for  $X$

Let’s rephrase:

“**only**( $\langle B, F \rangle$ ) : $\leftrightarrow B(F) \ \& \ X[X \approx F \ \& \ B(X) \rightarrow X = F]$ , where  $X$  is a variable of the type  $F$ .  
 $B$  = the background/focus skeleton with a variable  $X$ ,  $F$  = Focus

5.2 The difference between Restricting and Selecting Focus is that the presupposition  $B(F)$  of *only* is absent for Selecting Focus. “Would you like coffee or tea?” does not make any claims about which one will be chosen, whereas the speaker of “John bought apples and bananas” already assumes that the apples are bought:

Focus function	A says:	B answers:
Restricting	John bought apples and bananas	He <b>only</b> bought APPLES
Selecting	Would you like coffee or tea?	(I would like) COFFEE, please

5.3 Simplified formula:  $\forall x(B(x) \rightarrow x = F)$ . Inherent to the condition:  $x$  is an element of a pre-existing set of discourse accessible entities.

$\forall x(B(x) \rightarrow x = F) \equiv$	$p \rightarrow q$ : propositional logic. Transposition:
$\forall x(\neg(x = F) \rightarrow \neg B(x))$	$\neg q \rightarrow \neg p$

$$\forall x(\neg B(x)) \equiv \neg \exists x(B(x))$$

$\forall x(B(x) \rightarrow x = F)$ : For all things, if the background (focus skeleton) applies to a thing, then that thing is the focus.

$\forall x(\neg(x = F) \rightarrow \neg B(x))$ : For all things, if it is not the focus, then it is not the case that the background applies to all things = **there is not a thing to which the background applies.**

Some examples to further illustrate this:

If *you* cook, I will eat. If I do not eat, then *you* did not cook.

If you *cook* it, I will eat it. If I do not eat it, then you did not *cook* it.

Conversational implicature that the following is not left implicit: If you do not cook, I'll still eat. Compare this with a New Focus, where the answer may be perceived of as belonging to an infinite set of possible answers:

What do you want to eat? – (I want to eat) Broccoli. – Just broccoli? – Of course not, also ...

Step 1: If I want to *eat* [something], it is [broccoli]. **But is it broccoli and nothing else?**

Step 2: \*If it is not broccoli, I want to eat not anything. **No.**

5.4 We can use  $\forall x(\neg(x = F) \rightarrow \neg B(x))$  to distinguish between New Focus and Selecting Focus!

(7)

<i>nu</i>	<i>kuit</i>	<sup>13'</sup> LUGAL- <i>uš</i>	<i>tezzi</i>	<i>nu</i>	<i>apāt</i>	<i>iyami</i>
CONN	what:ACC.S.N	king-NOM.S.C	he.says	CONN	that:ACC.S.N	I.do

Whatever the king says (= tells me to do), that I will do. (KBo 17.4 ii 12'-13' (OS ritual, CTH 416.1))

Step 1: If I do something, it is what the king says.

Step 2: If it is not what the king says, then I don't do anything.

Step 2 makes sense (in the ritual context; nobody cares what the ritual practitioner does at home). Compare this with a case where Step 2 does not make sense:

(8) Given that my brother wrote to me as follows: "When (GIM-*an*) you turn over (your) daughter to me, the matters that are on your mind,

<sup>2</sup> <i>nu=war=at=mu</i>	<i>mān</i>	<i>ḥatrāši=ya</i>	<i>nu=war=at=mu</i>	<i>apiya</i>	<i>ŠUPUR</i>
CONN=QUOT=it=to.me	COND	you.write=also	CONN=QUOT=it=to.me	then	write

"if you also wish to write to me about them, write about them to me **then**" That statement is like my brother instead! (KUB 21.38 rev. 1-2 (NH letter, CTH 176))

Step 1: If you write to me at some time, it will be then (that is, when you turn over you daughter to me).

Step 2: \*If it is not then, then you will not write me at any time.

Would Ramses II tell Puduḥeba that if she doesn't write about her thoughts then, she can't write about them at any other time? Clearly, there is no exclusion of other options, and

Ramses merely offers a possible suggestion for when the queen might want to write about her concerns to him. Thus, *apiya* is simply a New Focus.

## 6. How further?

6.1 To start tests with passages without *apā-*, I randomly chose a ritual, the first one with an English translation, the Ritual of Puliša (CTH 407), ed. B.-J. Collins (ed.), [hethiter.net/](http://hethiter.net/): CTH 407 (TX 10.11.2014, TRen 23.07.2014).

6.2 Cause for the ritual: “The opening paragraph identifies the “author” of the ritual, and the occasion for it, which is the plague that is introduced into the civilian population by the returning troops. The ritual identifies the ultimate cause as an angry deity from the enemy land.”

6.3 Context: The king undresses and hands over his clothes to a male captive. He says to the captive: “If some male god of the enemy land has caused this plague, I have just given to him an adorned man as a substitute. *This* one (instead of the king) is great with respect to his head, *this* one (instead of the king) is great with respect to his heart, *this* one (instead of the king) is great with respect to also his body parts.”

Note that there is a replacing focus in the “this one” clauses: *IŠTU SAG.DUŠŠU=wa [kāš]<sub>F</sub> šalliš* “**This one** (instead of the king) is great with respect to his head”.

*nu=war=kan* [zik DINGIR-LIM LÚ] [kēz LÚ unuwantit] parā galangaza ēš  
CONN=QUOT=PTCL you deity male this:INSTR man adorned:INSTR forth placated you.be  
“You, male deity, be placated with this adorned man” (KBo 15.1 i 18-19, CTH 407)

6.4 We can at least test for contrastive focus versus new focus.

- “[*You*, male deity,]<sub>F</sub> be placated with this adorned man.” We assume that the idea that someone needs to be placated is in the common ground already, so *zik* ‘you’ is in focus.
- “You, male deity, be placated with [*this* adorned man (instead of the king)]<sub>F</sub>”. This would make sense given the instances with replacing *kā-* already.
- “You, male deity, [be placated with this adorned man]<sub>F</sub>”

	A	B	C
B(x)	If <b>someone</b> be placated with this adorned man	If you, male deity, be placated with <b>someone</b>	If <b>something is happening</b> to you
x=F	That someone = <b>you</b>	That someone = <b>this adorned man</b>	That something = <b>be placated with</b>
¬(x = F)	If that someone = not <b>you</b>	If that someone = not <b>this adorned man</b>	If that something = not <b>be placated with</b>
¬B(x)	Then <b>no one</b> should be placated	Then you should not be placated <b>by anyone</b>	Then <b>nothing else</b> is happening to you
True?	No	No	No

At least there is no contrastive argument nor predicate focus, but perhaps we could have New Focus. Since there is no presupposition that the *deity* knows someone will be placated, it is the first time the deity is addressed, I think argument focus does not apply at all. Our best bet at this point is to assume non-contrastive predicate focus: “About you, o male deity, be placated with this man”:

*nu=wa=kan* [*zik* DINGIR-LIM LÚ]<sub>TOP</sub> [*kēz* LÚ *unuwantit parā galangaza ēš*]<sub>FOC</sub>

To be continued.

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