ALLOSEMIES OF THE ANATOLIAN CONJUNCTION PARTICLE

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1 PRELIMINARIES

- We[1] will be tying the notion of ALLOSEMY$_i$ with/to ALLOPHONY$_j$, in the loose definitional spirit of Marantz (2013).

    - ALLO$\left\{ \begin{array}{l} \text{-SEMY}_i \\ \text{-PHONY}_j \end{array} \right\}$ is the phenomenon in which a single morpheme can have multiple $\left\{ \begin{array}{l} \text{semantic}_i \\ \text{phonetic}_j \end{array} \right\}$ realisations

    - ∴ We are looking at $\left\{ \begin{array}{l} \text{meanings}_i \\ \text{sounds}_j \end{array} \right\}$ determined by context

- Focus on the meaning component (naturally) but with reference to sound realisations as windows into the semantic problem.

- Hittite has a superparticle (quantifier particle) that may realise as FCI, ∀, AND <u>but also BUT</u>. Hoffner and Melchert (2008) claim there are two such particles: <u>the argument-level/*e*-type AND-based one</u> and <u>the sentence-level *t*-type BUT-based one</u>.

① ∀, AND, ADD, NPI terms are claimed to be built on the AND particle.

② FCI terms are claimed to derive from the BUT particle.

PROBLEM#1 Why would FCIs have a clausal makeup and be based on a clausal adversative conjunction?

PROBLEM#2 What's the relation between AND and BUT particle? Given the descriptive allosemy and allophony between them, how do we derive one from the other?

- If FCIs derive from the clausal adversative conjunction marker, then Mitrović and Sauerland (2016) are wrong: they predict only *e*-type conjunction markers to have extra-conjunctive meanings (like ∀, ADD, NPI, FCI).

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1 **Key.** NSR=non-specific relative; FCI=free-choice item; NPI=negative polarity item; ADD=additive; ∀=universal (dist.) quantifier; ∃=existential quantifier; AND=standard conjunction; OR=standard disjunction; BUT=adversative (contr.) conjunction; V/C=vowel/consonant

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1.1 Superparticles in coordinate clusters
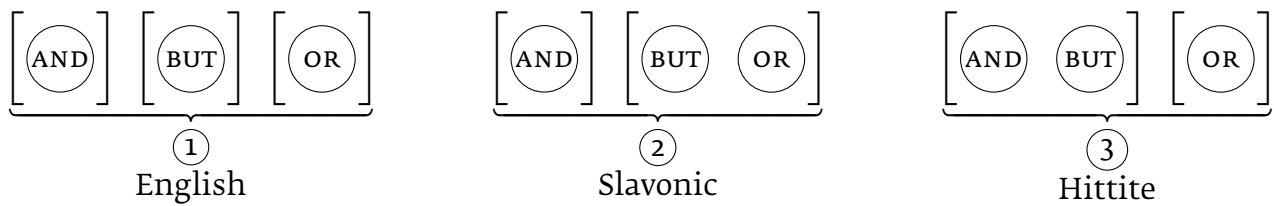
wrt.

- type 2: [*a-li* : *i-li*] :: [but : or]

- type 3: [*-(y)-a* : *-m-a*] :: [and : but]

2 ALLOSEMY OF *and* AND *but* IN HITTITE

- At a first glance Hittite distinguishes between "and" and "but" just as clearly as the majority of languages.

2.1 and=but

- The distinction between "and" and "but" is very clear in case they follow a vowel.

- In such contexts, "and" is spelt (*-ya*) whereas "but" is spelt (*-ma*).

- The distinction disappears when the conjunctions follow a consonant. In this case "but" does not geminate the preceding consonant whereas "and" geminates the previous consonant: VC=a "X=**but**" vs VCC=a "X=**and**".

- However, there are several contexts where the distinction is obviously lost. In such cases -(m)a "but" geminates a consonant whereas -(y)a "and" does not geminate a consonant. Commonly, the rare cases where "but" geminates a consonant whereas "and" does not are assessed as mistakes, see, e.g., Hoffner and Melchert (2008: 400):

    "Because the topicalizing/contrastive -a had disappeared in New Hittite (see §29.25, p. 395), copyists did not always understand its usage in older texts and replaced it incorrectly with geminating -a rather than with -ma. One must therefore sometimes interpret geminating -a in such copies as the topicalizing/contrastive marker. Rarely the opposite is true: intended conjunctive/additive -a/-ya is wrongly written without gemination of the preceding consonant [...]".

2.2 and≠but

- However, it is immediately obvious that the mismatch between gemination of the final consonant and the semantics cannot be reduced to the misuse while copying.

- Clear cases when no gemination unexpectedly corresponds to the semantics "and" occur in the originals:[2]

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2   The first one comes from a letter which is very unlikely to have been copied.

(1)   MH/MS (CTH 186) HKM 30 upper edge 23-5
kāša≠za   GÉME   [kui]t dān
PERF≠REFL female.slave as   take.PRTCP.NOM.SG.N
dayan≠a   ḫar-zi
steal.PRTCP.NOM.SG.N≠but AUX-3SG.PRS

"(For) whatever this female slave has taken and stolen (from you)" (Hoffner 2009: 155; cf. Hoffner and Melchert 2008: 400)[3]

- The other cases come from Old Hittite originals:

(2)   OH/OS (CTH 416.B) KBo 17.3+ rev. iv 31-33

line 1.   ta   ḫāḫḫall-it gāpin-an   dā-ḫḫe
CONN twig-instr thread-ACC.SG.C take-1SG.PRS

2.   kalulup-i=šmi   ḫulalian   kui-t=a
finger-LOC.SG=their.LOC.SG wind.PRTCP.NOM.SG.N which-NOM.SG.N=but
anda
in

3.   ḫalkiy-aš=a   zízHI.A-š=a   ḫaršarr=a
barley-GEN.SG=but emmer-GEN.SG=but head.ACC.PL.N=and

4.   nu   apatt=a   GÌR=ŠUNU ki-tta
CONN that.ACC.SG.N=and foot=their lie-3SG.PRS.MED

"(1) And with the twig I take the thread, (2) what(ever) is wound around their finger(s), (3) **and** the   'heads' of **both** barley **and** emmer, (4) also that lies at their foot." (Otten and Souček, 1969: 38–9)

- Meacham (2000: 65) observes that "*halkiyaš=a* clearly occurs as the first member in the correlative [bisyndetic distributive conjunction] 'of both barley and emmer' but is written without gemination."

- It is curious that another OH/OS copy (2) has the expected gemination on zízHI.A-*š=a*.

- A similar distribution is attested in the following case from the same text (see Meacham 2000: 66)

(3)   OH/OS (CTH 416.B) KBo 17.3+ obv. ii 8'
[(mān MUŠENḫāran-a)]n ERÍNMEŠ-t-an=a   3-iš   waḫnū-m[i]
if   eagle-ACC.SG.c troops-ACC.SG.c=but thrice wave-1SG.PRS

"When I wave the eagle and the troop thrice" (Otten and Souček, 1969: 28–9)

- Another OH/OS copy again has the expected variant spelling attesting the expected gemination:

(4)   OH/OS (CTH 416.A) KBo 17.1+ obv. ii 37'
ERÍNMEŠ-tann=a
troops-acc.sg.c=and

"**and** the troop"

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3   Here Hoffner (2009: 155) assesses the second participle as a mistake: *daya<n>n=a*, but this is simply an ad hoc interpretation.

- Contrary to expectations of Hoffner and Melchert (2008), it was suggested by the editors of the text that 3 which consistently makes use of non-geminating =a "and", although a younger copy of the non-preserved original, is superior in its readings to 2 and better preserves the original phrasing and scribal practices than 2 (Otten and Souček, 1969: 14).

- Thus in the philological context correction of C=a of 3 to CC=a in 2 should be assessed as normalising the deviating original usage, not as a sporadic mistake of writing C=a by the scribe of 3 instead of CC=a.

- Yet another case similarly comes from the OH/OS original of the Laws, contrary to Hoffner and Melchert's (2008) hypothesis, not a later copy:

(5)   OH/OS (CTH 291.I.a.A) KBo 6.2 obv. ii 58-62 (=§ 50)

    line 1.   ^{LÚ}UK[?].KI.E kuiš ^{URU}Nērik taruḫzi

    2.   kuiš ^{URU}A[rinni]

    3.   kuiš ^{URU}Ziplanti ^{LÚ}SANGA-eš

    4.   *INA* ^{URU}URU^{DIDLI} ḫūmant[i] É^{HI.A}=*ŠUNU ELLU*

    5.   *Ù* ^{LÚ.MEŠ}hala=*ŠUNU* luzzi ka[rpianzi]

    6.   mān ^{URU}Arinna 11 ITU-aš tiezzi

    7.a   nu apē[l É=*ŠU*]

→ 7.b   kuel=**a**   gišeyan   āšk-i=šši

           which-GEN.SG=<u>but</u> eya-ACC.SG.C door-LOC.SG=his.LOC.SG

           šakuwān

           S.PRTCP.NOM.SG.N

    7.c   a[peniššan]

- Hoffner (1997: 61–2) assesses the context as follows:

"(1) The … [man] who …-s in Nerik, (2) he who is a priest in Arinna (3) (or) in Ziplanta (4) in every town their houses are exempt, (5) whereas their associates render the ^{*luzzi-*}services. (6) In Arinna, when the eleventh month arrives, (**7**) [the house of him] at whose gate an *eyan* (tree or pole) is … is likewise (exempt)".[4]

- However, the best understanding of the difficult context of cl. 7 as for word order is that of Güterbock et al. (1980: Š: 52) [CHD]:

"That one's (i.e., the man mentioned earlier) [house] – <u>and</u> (the house of him) whose *eyan* is š.-ed at his gate – is li[kewise] (exempt)".

- It makes it necessary to suppose that *kuela* here is *kuel=a* "whose=AND", another violation of the <u>C=a</u> "X=**but**" vs <u>CC=a</u> "X=**and**" distribution occurring in the OH/OS original.

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4   Cf. Meacham (2000: 76) "Then the house of that one?, whosoever eyan tree? (is) visible? at his gate, shall be e[xempt.]".

3 ALLOSEMY OF FREE CHOICE AND UNIVERSAL QUANTIFICATION IN HITTITE

- Another aspect of allophony is even more systematic.

- Both functions are regularly marked by conjunctive superparticles in Hittite and other Anatolian languages.

- The two most commonly occurring particles sharing both functions are *-Ho and *-ke. They either combine both meanings synchronically or attest them in closely related languages.

- For a quick summary of basic data we will provide the table summarizing indefinite pronoun systems in Anatolian languages, taken from Sideltsev and Yakubovich (2016):

LANGUAGE	∀	NSR	FCI	NPI	∃
Hittite	kuišš-a	kuiš (imma), kuiš (imma) kuiš	kuiš imma, kuiš imma kuiš	kuiš-ki	kuiš-ki
Luwian	kwis-ha	kwis, kwis-ha, kwis-ha kwis	kwis-ha	kwis-hakwihha-	?
Lycian	?	tise tise	tisñ-ke (ACC)	ti-ke, tihe	?
Lydian	?	qiš, qid-a	qesi-k	qesi-k, qi-k	?
Palaic	kuiš-a (?)	kuiš-a, kuiš kuiš (?)	?	?	?

TABLE 1: *Anatolian indefinite expressions with *-Ho and *-ke extensions (Sideltsev and Yakubovich, 2016)*

4 ANALYSIS

4.1 Synchronically

4.1.1 *and* and ∀ and *any* and *wh/ever*

- What underlies the two allosemies is a core meaning of μ which activates the alternatives (𝔄) and introduces an exhaustification procedure, handled by the 𝔛-operator. See Chierchia (2006) for details of the system and Mitrović (2014) for an implementation.
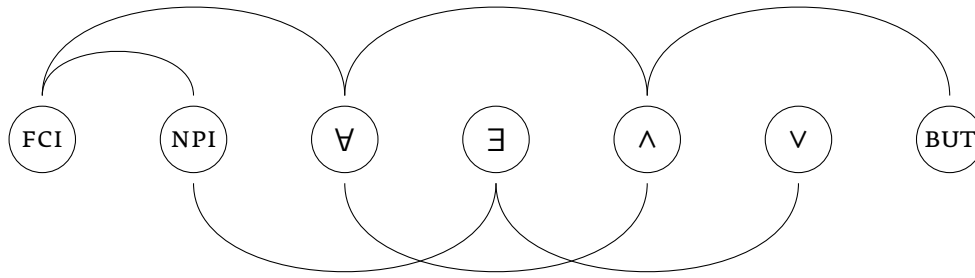
FIGURE 1: *A sketch of meaning identities and oscillations.*

- This yields a systematic way to account for the Hittite incarnations:

- Two entries for deriving *e*-type superparticles

4.1.2 (Anti)exhaustive μ

- The μ marker (superparticle), fundamentally makes sure that the alternatives ($\mathfrak{A}$) of its host are obligatorily active, and consequently exhaustified.

(6) $[\![\mu]\!]([\![XP]\!]) = \{[\![XP]\!]\}^{\mathfrak{A}} \rightsquigarrow \mathfrak{X}\left(\{[\![XP]\!]\}^{\mathfrak{A}}\right)$

(7) Lexical entry for $[\![\mu^0]\!]$:

$$[\![\mu^0]\!](\phi) = \mathfrak{X}^{(2)}(\phi)$$

- Exhaustification ($\mathfrak{X}$) procedure as per Chierchia (2013), int al.

(8) $\mathfrak{X}_{[\delta\mathfrak{A}]}(p) = \begin{cases} \text{polarity reading} & \text{if under } \neg \\ \text{FC reading} & \text{if under } \diamond \\ \text{additive reading} & \text{if } \mathfrak{X} \text{ is iterative } (\mathfrak{X}^2) \\ \bot & \text{otherwise} \end{cases}$

4.1.3 Pair-forming J

- The J(unction) head denotes a neutral structural common denominator for conjunction and disjunction and so its role will be to pair arguments up without stating whether the pair is conjoined or disjoined.

- We also posit an abstract Boolean operator that attaches to JP and enters into a checking relation with the heads of the coordinands. (We develop this below.)

- As per Szabolcsi (2014) and Mitrović (2014), the J head is interpreted as a bullet-operator ($\bullet$) (Winter, 1995, 1998)).

(9) Lexical entry for $[\![J^0]\!]$:

$$[\![J^0]\!](\phi)(\psi) = \phi \bullet \psi = \langle \phi, \psi \rangle$$

- The conjunctive meaning obtains when two additive μPs are con-conjoined via J, post-suppositionally as per Brasoveanu and Szabolcsi (2013).
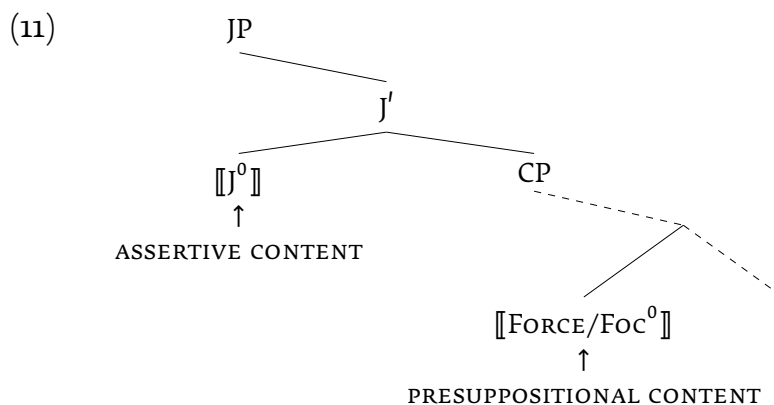
4.1.4 *and* and *but*

- Adversativity of *-(m)a* is treated as as conjunction (assertively) and discourse-contrastive (presuppositionally), following Toosarvandani (2014). See Mitrović and Sideltsev (2017) for details.

(10) $[\![\phi \text{ but } \psi]\!] =$
   i. At issue (assertion): $[\![\phi]\!] \wedge [\![\psi]\!]$
   ii. Presupposition:
        $\exists p : p \in \text{QUD}([\![\phi]\!] \to p) \wedge \exists p : p \in \text{QUD}([\![\psi]\!] \to \neg p)$

- The *-(y)a* particle we are relating to *-(m)a* is the conjunctive one (μ) that also yields quantificational meanings (above).

- But μ is an argument *e*-type conjunction particle and not sentential (*t*-type), as suggested in Mitrović and Sauerland (2016).

- The *-(y)a$_\mu$~-(m)a* allosemy is not really expected, *ceteris paribus*.

- We propose that the *e*-type μ moves into the higher category to give a *t*-type conjunction.

- Where does it move to? To where it gets the adversative ingredient for its meaning.

(11)

```
                    JP
                    /
                   /
                  J'
                 /  \
                /    \
          [[J⁰]]      CP
            ↑          ⋰ ⋱
   ASSERTIVE CONTENT  /    ⋱
                     /      ⋱
              [[Force/Foc⁰]]
                   ↑
          PRESUPPOSITIONAL CONTENT
```

- μ starts its life in the left periphery/LP (presumably as Foc^0) of the nominal projection (DP), and then incorporates into the Foc^0 in the LP of *v*P, from where it successive-cyclically rolls up to the Foc^0 in the clausal field.

- Foc^0 in the clausal field provides the adversative effect in clausal conjunctions.

(12)

$$\text{CP}$$

Force$_i^0$ $t_i \in \dots$

Force^0

μ^0 Foc$_{[v]}^0$
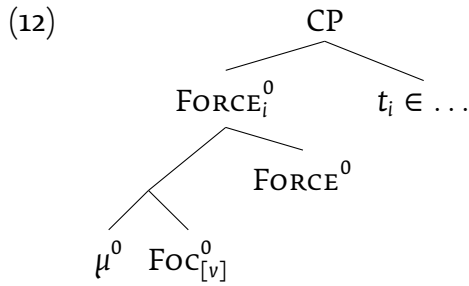
- Vocabulary Insertion rules:

(13)   a. $\mu^0 \Leftrightarrow$ <(y)a> ....*e*-type particle by default

      b. $\mu^0 \Leftrightarrow$ <(m)a> $\big/$ [v] or when moved

- This gives the effect that μ still performs (recursive) exhaustification that leads to additive inferences and, consequently, conjunction via J.

- Once incorporated into a clausal Focus/Force head, the latter projects the presupposition of contrast, as per (10).

- Ex. of (10) at play, from Mitrović and Sideltsev (2017):

(14)   NH/NS (CTH 106.B.2) KBo 4.10+ obv. 10' 12'

     1.   mān ⸗ aš ḫarkannaš ⸗ ma
     2.   n ⸗ aš ḫarakdu
     3.   É-*TUM* ⸗ ma ⸗ šši ⸗ kan KUR-*TUM* ⸗ ya lē danzi
     4.   n ⸗ at damēl NUMUN-aš lē piyanzi

$\phi_1 \rightarrow$ 5.   *ŠA* ^{m}Ulmi-^{d}10-up ⸗ pat NUMUN-aš daddu

$\{\psi_1, \phi_2\} \rightarrow$ 6.   <u>da</u>-<u>ddu</u>   ⸗ **ma** ⸗ at   *ŠA* DUMU.NITA
             take-3sg.imper   but   them of male

$\psi_2 \rightarrow$ 7.   *ŠA* DUMU.MUNUS ⸗ **ma** lē   danzi
          of female   but PROHIB take

'(1) But if he (son or grandson of Ulmi-Teššub) is deserving of death, (2) let him perish. (3) But let them not take the house or land from him. (4) Let them not give them to another (man)'s progeny. (5) Only someone of the progeny of Ulmi-Teššub shall take (them). (6) (Someone) of the male line <u>shall take</u> them. (7) **But** (those) of the female line shall not take them.'[5]

- Two occurrences of -*(m)a* which, *ceteris paribus*, operate on two distinct QUDs: the first -*(m)a* in clause 6 is part of a conjunct which has a clause 5 as its antecedent conjunct, while -*(m)a* in clause 7 has clause 6 as an antecedent.

- The QUD for (14), given clauses 5 and 6, can be simply reconstructed as 'Who shall take?' with possible answers ranging over some contextually determined set of individivuals, as long as they are descendant of the Ulmi-Teššub line.

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5   Following van den Hout (1995: 24 25); Beckman (1996: 104).

(15) a. The context and QUD of clauses 5–6:
$\text{QUD}(\llbracket (14) @ 5\text{–}6 \rrbracket) = \{x \in D_e : \text{TAKE}(x) \land \text{ULMI-TEŠŠUB}(x)\}$

$$= \begin{cases} \text{TAKE}(a) \land \text{ULMI-TEŠŠUB}(a) \\ \text{TAKE}(b) \land \text{ULMI-TEŠŠUB}(c) \\ \text{TAKE}(d) \land \text{ULMI-TEŠŠUB}(d) \\ \quad\quad \dots \end{cases}$$

   b. Implication:
$\text{QUD}(\llbracket (14) \rrbracket \to p : \text{MALE}(x) \lor \text{FEMALE}(x)$

   c. Assertion:
$\llbracket (14) @ 5\text{–}6 \rrbracket = \phi_1 \land \psi_1$
$= [\text{TAKE}(x) \land \text{ULMI-TEŠŠUB}(x)] \land [\text{TAKE}(x) \land \text{MALE}(x)]$

   d. Presupposition:
   i. $\phi \to p$
   ii. $\psi \to \neg p$

4.2 Diachronically

- The whole system of Anatolian indefinite pronouns is built upon relative/interrogative pronouns with the help of two markers which are restored by internal Anatolian reconstruction as *-Ho* and *-ke*.

- As for the main marker of indefinite pronouns in Hittite, *-ki/ka*, which corresponds to *-ke*, we follow Sideltsev and Yakubovich (2016) in tracing it back to the additive particle *-kku*, which is attested in Hittite, thus it was also originally a marker of additive focus, as all particles with the meaning "and".

- Later on the combination of relative pronoun + *-kku* "and" (> *-ki*/ka) developed a free choice function "whatever".

- The function is preserved only in Lydian *qesi-k*. In reflexes of the pronoun attested in other Anatolian languages Hittite *kuiš-ki* and Lycian *ti-ke* the free choice function had by the time of written record already further evolved into existential quantifier/NPI, although some traces of its original free choice function might still be discerned in Hittite (see Sideltsev and Yakubovich 2016). In Lydian both free choice and NPI functions coexist.

- The other marker of indefinite pronouns in Anatolian, *-Ho* is also originally an additive particle.

- The function is still attested in historical Hittite as *-(y)a* "and" and in Luwian as *-ha* "and". Just like *-ki/ka*, in combination with the relative/interrogative pronoun it developed into a free choice marker.

- The universal function "each" is the only one attested for Hittite pronouns which consist of relative/interrogative pronoun + *-ha*, to yield a universal FCI *kuišš=a* "whichever".

- In the Luwian branch a free choice function is available for the etymologically identical pronoun, seen in Luwian *kwis-ha* and Lycian *tise tise*. The Luwian pronoun

also attests a universal function whereas Lycian only shows free choice. Then in the Luwian branch these pronouns developed into indefinite pronouns. This stage of evolution is available in Luwian *kwis-ha*, which functions as an NPI, although Luwian also simultaneously retains the universal and free choice functions of the same series of pronouns. (See Sideltsev and Yakubovich 2016 for details).

- There is yet another indefiniteness marker in Hittite, *imma*, see Sideltsev (2017) for details.

- It also fits perfectly well into the general picture of diachronic Anatolian development sketched above. *Imma* was primarily used as a focus marker with the meaning "even". Then, when used with relative/interrogative pronouns, it developed into a marker of free choice pronouns, attested as *kui- imma (kui-)*, yet later it evolved into indefiniteness marker, attested both in some *kui- imma (kui-)* uses and in *imma kuiški*.

- It is probably not incidental that this last spread into the indefinite domain is unambiguously attested only in three clauses from the same text, KUB 31.71+[?]. It might imply that the last stage of development was sporadic for *imma*, but it is instructive that this sporadic extension was exactly along the same lines as all other indefinite pronouns in the Anatolian languages developed.
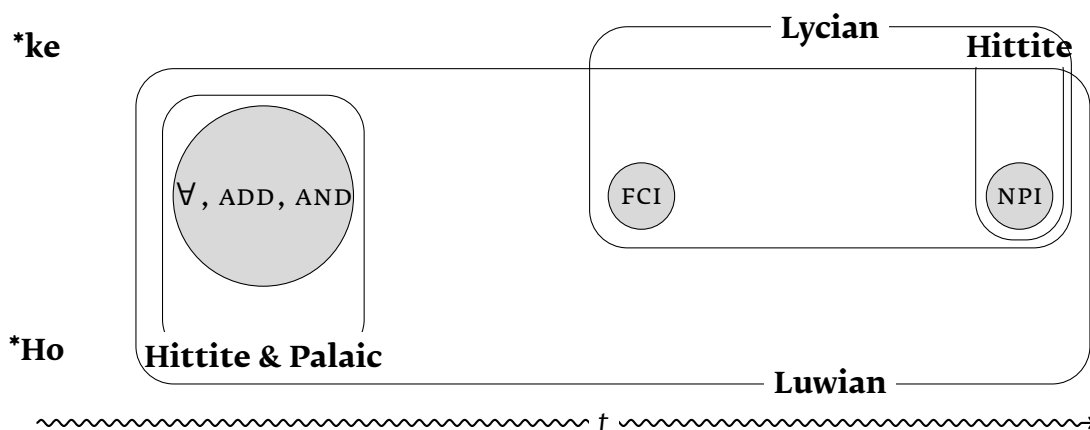

FIGURE 2: *Genesis and typology of quantifier expressions in Anatolian, based on Sideltsev and Yakubovich (2016). Time passes from left to right.*

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