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Anatolian

Class 4: Anatolian (morpho)syntax



Anatolian syntax

- **Hittite syntax** better explored (also from different theoretical angles), no monographic treatment available (but Luraghi 1990)
- **Luwian syntax**: monographic treatment in a formal framework (Giusfredi 2020)
- Minor languages: no systematic treatment, due to poor status of attestation
- Comparative Anatolian view of selected topics in Luraghi (2017)



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Word order



Word order: verb final and Wackernagel's law

piran=ma= at= mu m^DXXX.ᵀU-as DUMU m^zida
before CONN 3SG.N/A 1SG.OBL A.:NOM child Z.

m^mmaniyahhiskit

administer:3SG.PRET.ITER

‘Before me Armadatta, the son of Zida, had administered it.’

KUB 1.1 i 28 (Hittite);

[tiy]ammis=pa=ti [t]ap-PIŠ-sa naw[a a]yari

earth:NOM CONN PTC heaven:NOM NEG become:3SG.PRS

‘And the earth does not become heaven.’ KUB 35.54 ii 43–44 (Cun. Luvian);

ni= pa= si musanti

NEG PTC 3PL.OBL satisfy:3PL.PRS

‘They cannot be satisfied.’ KUB 32.18 9 (Palaic);

fak= m= λ= it= in qλdān=k artimu=k
CONN CONN 3SG.DAT PTC PTC Q:NOM and A.:NOM and
katsarlokid

bring.destruction:3PL.PRS

‘May the gods Qλdāns and Artemis bring destruction to him.’ 23.10 (Lydian).

Word order changes largely
pragmatically motivated (e.g.
Luraghi 1990, Goedegebuure 2014)



Wackernagel's law in Hittite

Host	Quotative	1 st /2 nd PRO.PL	3 rd PRO	ACC/DAT PRO	REFL	local particles
<ul style="list-style-type: none">Accented word (+ (y)a/(m)a/man)Connectives: <i>nu, šu, ta</i>	= <i>war</i> (Luw. - <i>wa-</i> , Lyc. -(u) <i>we-</i>)	= <i>naš</i> = <i>šmaš</i>	= <i>a-</i>	= <i>mu</i> = <i>ta/du</i> = <i>še/i</i>	= <i>za</i>	= <i>an</i> = <i>apa</i> = <i>ašta</i> = <i>kan</i> = <i>šan</i>

NB: order not identical across Anatolian lgs.

Clitic chains

Wackernagel's enclitic < PIE

Sentence initial connectives: Luw. *a=*, Pal. *a=/nu=*, Lyd. *ak=* (PA **ó* < **óh₁*), Lyc. *s=* **BUT** also Hattic *pala/bala* → **Anatolian areal** feature? (Watkins 2001)



Hittite: NP order

AN: (1) *parkuin išnan*
pure.ACC dough.ACC
'pure dough'

→ exception: postposed *ḫumant-*,
dapiant- 'all' and participles

GN: (2) URU *Nešaš* LUGAL-*uš*
N.GEN king.NOM
'the king of Nesa'

utnē ḫūman 'the entire land'

DN: (3) *apūn memiyan*
DEM.ACC word(C).ACC
'that word/matter'

DGN: (4) *kāš tandukešnaš* DUMU-*aš*
DEM.NOM mortality.GEN son.NOM

'this mortal (lit. this child of mortality)' KUB 7.5 i 8



Hittite: verb fronting

ḫalinaš teššummiuš tarlipit šuwamuš 2-ki petumeni
clay.GEN vessel.ACC.PL t.INST full.ACC.PL twice bring.PRS.1PL

tarueni=ma=at ešḫar
say.PRS.1PL=CONN=3SG.ACC.N blood(N).ACC

DUMU.É.GAL-*iš* ^d*Ḫantašepan* LUGAL-*iš* *kiššari dai*
servant.NOM H.ACC king.DAT hand.DAT put.PRS.3SG

“Twice we bring inside the clay vessels full of t. (we **call** it blood);
the palace servant puts a H. divinity in the hand of the king.”
(KBo 17.1 i 18'-28')



Word order in Lycian

verb fronting

mê= (e)ne tubidi qlaj ebi se Malija se
CONN 3SG.OBL strike:3PL.PRS precinct local and *M.:*NOM and
tasa miñtaha
oath:N/A.PL *m.:*ADJ.N/A.PL

‘The local precinct and Malija and the oaths of the *minti* will strike him.’

TL 75.5 (Lycian);

ebêñnê xupã mê= (e)nê prñnawate Trijêtezi
this:ACC tomb:ACC CONN 3SG.ACC build:3SG.PRET *T.:*NOM

‘This tomb, Trijêtezi built it.’ TL 8.1–2 (Lycian).

left dislocation



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Grammatical relations

Neuter nouns in Anatolian

- Neuter plural subjects = singular agreement

^m*Āskali=ma* *uddār* *arāiṣ*
 A.DAT=CONN word(N).NOM.PL rise.PST.3SG

'Accusations arose against Askali.' (KBo 3.34 ii 18)

Traces in Latin, Indo-Iranian,
Greek (Dahl 2021)



- Banned from A position

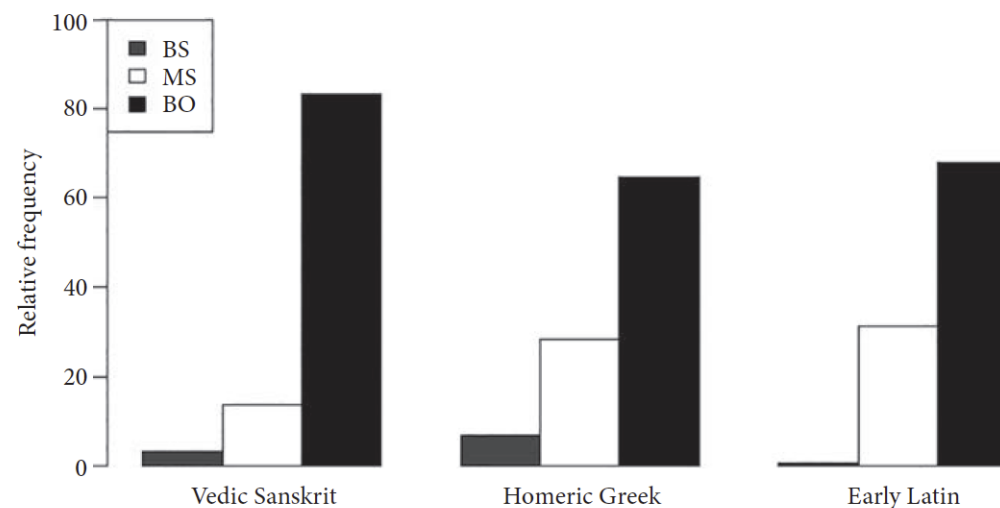


Fig. 2.2 Distribution of neuter nouns in core argument functions
 BS = Bivalent Subject; MS = Monovalent Subject; BO = Bivalent Object

Split ergativity in Anatolian

LUGAL- <i>u-</i> 'king (c.)' <i>paḥḥur</i> 'fire' (n.)		
A	LUGAL- <i>uš</i>	<i>paḥḥuwen-anza</i>
S	LUGAL- <i>uš</i>	<i>paḥḥur</i>
P	LUGAL-<i>un</i>	<i>paḥḥur</i>

Already Laroche (1962):

- CLuw. *-antiš*, *-antinzi*
- Lyc. - *ēti*

s=ēne

CONN=3SG.ACC

trm̃mili-j-ēti

Lycian-adj-*ant*.NOM.PL

'The Lycian oaths will destroy him.' (TL 149,10)

tesēti:

oath(n).*ant*.NOM.PL

qāñti:

destroy/seize?.PRS.3PL



shared **Anatolian**
feature



The origin of *-anza*

- Garrett (1990): *-anza* ABLATIVE > ERGATIVE

URU *Samuḥann=a... alwanzešnaza šer šunnista*
S.ACC=CONJ witchcraft.ABL/ERG above fill.PST.3SG

‘And he filled Samuha ... with witchcraft’ > ‘And witchcraft filled Samuha.’
(StBoT 24 ii 78, from Garrett 1990a: 278)

Problems:

- *-anza* is the ablative allomorph of *r/n*-stems, against expected more common *-(a)z* (PIE **-óti, *-ti*), e.g. *nēpiš-za* ‘from the sky’
- ablative used as Agent of the passive instead of the instrumental only from MH onwards (Melchert 1977)



Alternative account

Stage I (OH):

-ant-s/eš derivational 'individualizing' suffix with neuter nouns in A (PIE poss. **-e/ont-*)



Stage II (NH): *-ants/-anteš* ergative inflectional case endings

Table 4.3 Distribution of derivational and ergative *-ant-* (adapted from Goedegebuure 2018)

Status of <i>-ants</i>	Language Stage		Tot.
	OH/MH/Murs II	NH	
Derivational suffix	51	—	51
Potentially ergative	107	101	208
Tot.	158	101	259

NB: Luwian *-ant-* always derivational!



Split intransitivity: 3rd person enclitics

Object clitics → transitive verbs

takku **GU₄.MAH_i** *kuiški* *wemiezzi* *t=an_i* *parkunuzi*
if bull INDF.NOM find:PRS.3SG CONN=3SG.AC purify:PRS.3SG
'If anyone finds a bull and castrates it' (KBo 6.2 iii 33)

Unaccusative intransitives → subject clitics

n=aš *karū/nawi* *paizzi*
CONN=3SG.NOM already/yet go.PRS.3SG
'He has already / hasn't yet gone.'

Unergative intransitives → no subject clitics

nu=wa=šši EGIR-*an* *nuntarnut*
CONN=QUOT=3SG.DAT back hurry.PST.3SG
'He hurried after him.' (KUB 12.26 ii 14-15)

The rise of split intransitivity in Hittite

Motion verbs		-a-	∅
<i>ar^{hi}-</i>	arrive at	2	1
<i>araⁱhi-</i>	arise	1	—
<i>hⁱnk^{al}ta-</i>	bow	2	1
<i>h^ui^ab^{hi}-</i>	run	—	9
<i>iⁱannāⁱmi-</i>	go	2	—
<i>paⁱmi-</i>	go	21	7
<i>pi^tti^a-</i>	flee	1	—
<i>š^alik^a-</i>	approach	—	1
<i>š^amen^{mi}-</i>	withdraw	2	—
<i>tiⁱa^{mi}-</i>	step	15	2
<i>u^ua^{mi}-</i>	come	1	—
<i>u^ah^{mi}-</i>	turn	1	2
Total		48	23

Change-of-state verbs		-a-	∅
<i>ak^{hi}-</i>	die	24	—
<i>h^ar^kmi-</i>	perish	2	—
<i>id^alaueš^{mi}-</i>	turn bad	1	—
<i>kiš^a-</i>	become	2	—
<i>kiš^tanzⁱia-</i>	starve	1	—
<i>miⁱa^a- (mai-)</i>	grow	1	—
<i>pa^rkueš^{mi}-</i>	become clean	1	—
<i>GEME-re^{mi}-</i>	become a slave	1	—
		33	—

(21) states, spontaneous events > directional motion verbs > manner-of motion verbs



The origin of split intransitivity

Anatolian innovation: traces in Palaic, Luwian, and Lycian

- A. Analogy:** analogically built from object clitic to index P-like S arguments (Luraghi 1990, Teffeteller 2015)

- B. Contact:** development of enclitic pronominal systems in contact with Akkadian and Ugaritic (Viti 2015), areal trait of Anatolia (Watkins 2001)



Null referential objects

Widespread feature in ancient IE languages, reconstructable to **PIE** (Luraghi 2010, Viti 2015)

Vedic

ānu pūrvāḥ_i kṛpate ∅_i vāvaśāná

to former:ACC.PL yearn:PRS.3SG.MD long.for:PTCP.NOM

‘She yearns for former (Dawns) with eager longing for (them).’

RV 1.113.10; Keydana 2009: 136

Ancient Greek

ἀλλά που αὐτὸν_i θυμὸς ἐποτρύνει καὶ ∅_i ἀνώγει

but PTCL 3SG.ACC heart:NOM move:PRS.3SG and force:PRS.3SG

‘But certainly (his) heart moves him and forces (him).’

Il. 15.43; Luraghi 2003: 181

Latin

ad hanc te_i amentiam natura peperit, voluntas ∅_i

to DEM.ACC.F 2SG.ACC fury(F):ACC nature:NOM generate:PST.3SG will:NOM

exercuit, fortuna ∅_i servavit

train:PST.3SG fate:NOM preserve:PST.3SG

‘Nature generated you to this fury, will trained (you), and fate preserved (you).’

Cicero, *Cat.* 1.25; Luraghi 1997: 241



Null referential objects in Hittite

[(*nu* *ḫašš*)]*az ḫulliš_i dāi [(nu and)a ∅_i (peššizzi)]¹¹*

CONN hearth:ABL pine.cone:ACC take:PRS.3SG CONN inside throw:PRS.3SG

‘[And from the hear]th he takes a pine cone [and throws (it) inside].’

KBo 17.11+ i 40

Table 2: Distribution of NOs and anaphoric resumption in OH

Text	DO omission		Anaphoric resumption	
	NOs	Ambiguous spelling	Clitic pronouns	Tonic pronouns
rituals	25	18	58	10
Laws	11	5	53	9
Anitta	1	–	8	–
Zalpa	3	–	11	–
Chronicle	2	–	20	1
instruction	1	–	–	–
CTH 631	49	8	7	3
Total	91	31	157	23
	91		180	

Demise of
NOs from
OH > NH



Non-canonical subjects

Widespread feature in ancient IE languages, reconstructable to **PIE** (Viti 2017, Barðdal 2023, Barðdal et al. 2023)

Mich schauderte und ___ ekelte.
me.ACC felt.horrified.3SG and Ø.ACC felt.disgusted.3SG
'I felt horrified and disgusted.'

Suae quemque fortunae paenitet
his.OWN(GEN.SG) each(ACC.SG) lot(GEN.SG) regret(PRES.3SG)

'Each man is discontent with his lot' (C. Fam. 6.1.1)

Ancient Greek (isolate; Aesch. Ch. 946)
hôi mélei kryptadíou máchas
REL.DAT.SG care.for.PRS.3SG clandestine.GEN.SG battle.GEN.SG
'who cares for the clandestine battle'



Non-canonical experiencer subjects

Accusative

- (1) *mān antuhšan SAG.DU-ŠU ištarakzi*
if man.ACC head=3SG.POSS ail.PRS.3SG
'If a man has head pains.' (KUB 8.36 ii 12-13)

Dative

- (2) *nu=šši maḥḥan kāšti kāninti*
CONN=3SG.DAT when hunger.DAT thirst.DAT
nakkešta
become_troublesome.PST.3SG
'When it (=the population) started to suffer hunger and
thirst.' (KUB 14.15 iii 45-46)



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Relative clauses

Huggard 2015, Melchert 2016, Inglese 2016,
Motter 2023



Correlative dyptic

[REL₁ N₁ V] [PRO₁ V]

Old Indic (from Lühr 2005: 84)

agne yaṃ yajñam adhvaṃ viśvataḥ paribhūr asi

Agni:VOC REL.ACC sacrifice:ACC offering:ACC all.around surrounding be:PRS.2SG

sa id deveṣu gacchati

DEM.NOM truly god:DAT.PL go:PRS.3SG

“Agni, the sacrifice and the offering that you completely encompass, that sacrifice truly goes to the gods.” (*RV* 1,1,4)

Ancient Greek

hós ke theoís epipeithētai mála t' ékluon

REL.NOM PTC god:DAT.PL obey:SUBJ.PRS.3SG.MID indeed PTC hear:AOR.3PL

autoû

DEM.GEN

“Whoever obeys the gods, they indeed listen to him.” (Hom. *Il.* 1.218)

Lehmann 1974, Justus 1976



Hittite

GIŠSUKUR^{HIA}=*ma* Û GIŠPA^{HIA} *kie* ḫarkanzi
spear(PL.N)=PTC CONJ scepter(PL.N) REL.ACC.PL.N hold:PRS.3PL
nu=šmaš=at=kan 1-aš LÚMEŠEDI arḫa dāi
CONN=3PL.DAT=3PL.ACC.N=PTC one:NOM guard away take:PRS.3SG

“But which spears and scepters they hold, one guard takes these away from them.”
(KBo 4.9 Rev. v 3-5)⁵⁴



Luwian and Lydian

kalmiyanin *-ti* *-an* *kuis* *ata*
stick.ACC.SG REFL he/it.ACC which.NOM.SG make.PST3SG

a *-ti* *kalmiyanin* *laddu*
INTR REFL stick.ACC.SG take.IMP3SG

“He who made it a stick for himself should take the stick for himself.”²⁷⁰

Lydian (Text 45, line 5)

ak=it *esλ taacλ* *qis* *fēnslibid*
CONJ=PTC this votive-object.D-LSg REL-Nsg violate.Pr3Sg

‘Whoever *violates* this votive object...’



Lycian

Lycian (TL 101, 3–5; Limyra)

kbi: tike: ti ñtepi tadi: a[t]la[h]i: tibe: kbijehi tibe=te:

other some.ASg REL-NSg in put.Pr3Sg his own or another's.ASg or=PTC

ala[h]adi ti: m=ene: mâ[h]ãi: tubeiti wed[rẽñ]ni

inter.Pr3Sg REL-NSg CONJ=3ASg god.NP1 strike.Pr3Pl w.NP1

‘Whoever puts someone else inside, his own or another’s, or whoever *makes an interment*, the w. gods shall strike him!’



Postposed restrictive RCs

*na-at-ta a-pu-u-un GEŠTIN-an pí-i-e-er LUGAL-uš **ku-in** a-uš-ta*
NEG DEM.ACC wine:ACC give:PST.3PL king:NOM REL.ACC see:PST.2SG

“They did not give (me) that wine that you, the King, saw.”

(KBo 3.34 ii 5-6 [*Chronicle A*])



Postposed restrictive RCs

Hieroglyphic Luvian (ANCOZ 7, §§5–6)

ni-pa-ta[?] REL+*ra/i* *hu+ra/i-x-x* INFRA ... || FINES-*hi-zi* .REL-*sa*
or=PTC somehow ... below boundaries.AP1 REL-NSg
|za-la-na PONERE-*wa/i-i* *mu-wa/i* PURUS.FONS.MI REL-*zi* *|pi-ya-ha*
z. (adv.) put.Pr3Sg 1NSg=QUOT Suppiluliuma REL-AP1 give.Pret1Sg
‘Or who in any way...puts *z.* the boundaries that I, Suppiluliuma, made...’

Lycian (TL 80, 2)

se=i=ni *ñtepi tâtu* .*tike* *ne=de* *xuwati=ti*
and=PTC=PROHIB in put.Imv3Pl INDEF-ASg NEG=PTC stand-near.Pr3Sg=REL-NSg
‘And let them not put anyone inside who is not closely related.’



Embedded RCs?

Hittite (KBo 6.2 ii 61–62; OH/OS)

nu apē[l É=SÚ] kuel=a ^{GIŠ}*eyan āški=šši šakuwān a[peniššan]*
CONJ 3GSg house REL-GSg=PTC yew.N-ASg gate=his.D-LSg s.N-ASg likewise
‘The house of him at whose gate a yew tree is *s*-ed is (treated) likewise.’¹⁴

Lycian (N320, 22–25)

se=wa(j)=aitē: kumaha: ēti sttali: ppuweti: kmmē:
and=PTC=make.Pret3Pl sacred.N-API on stele.D-LSg write.Pr3Pl as-much.N-ASg
ebehi: xñtawataha: xbidēñnaha: se=rKKazumaha
this.D-LSg of-king.N-API of-Kaunos.N-API and=of-A.N-API
‘And they have made sacred as belonging to the King of Kaunos and Arkesima as much as they write on this stele.’

Verbal aspect



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Aspect in Hittite

“Any basic verbal stem in Hittite may be read as perfective or imperfective, provided that its inherent meaning and the context are appropriate” (Hoffner & Melchert 2008: 317)

PERFECTIVE

<i>namma=aš</i>	<i>INA</i>	^{HURSAG} <i>Zukkuki</i>	<i>EGIR-pa</i>	<i>uet</i>
then=3SG.NOM	to	mountain.Z.	back	come:PST.3SG
‘Then he came back to Mt. Zukkuki’				[KBo 5.6 i 1]

IMPERFECTIVE

<i>nu</i>	<i>kuitman</i>	^{m.GIŠ} <i>GIDRU-LÚ-iš</i>	<i>IŠTU</i>	<i>KUR</i>	^{URU} <i>Mizri</i>	<i>EGIR-pa</i>
CONN	while	<i>H.:</i> NOM	from	land	Egypt	back
<i>uet</i>						
come:PST.3SG						
‘While Hattusaziti was coming back from the land of Egypt’						[KBo 5.6 iii 26]



Analytic telicity marking

kuenzi=uš LUGAL-*uš* [...] *n=an=kan* *kunanzi*
kill.PRS.3SG=3PL.ACC king.NOM CONN=3SG.ACC=PTC kill.PRS.3PL

‘The king may have them executed (or he may spare them) [...] (They shall substitute one sheep in the place of the man) and kill it.’ (KBo 6.26 iv 17-21)

ŪL=aš *dapianza arḥa* BIL-*ni*
NEG=3SG.NOM entire.NOM away burn.PRS.MID.3SG

‘(If the city of A. survives) and it does not entirely burn to the ground.’ (KUB 15.12 iii 5)

Telic function of **preverbs** in other ancient IE languages, e.g. Lat. *edo* ‘eat’ > *com-edo* ‘eat up’, *dormio* ‘sleep’ > *ob-dormisco* ‘fall asleep’



“Aspectual” suffixes

Derivational suffixes: *-ške/a-*, *-šša-*, *-anna/i-* “synchronically [...] function effectively as suppletive allomorphs of a single morpheme” (Melchert 1998: 414)

Distribution of *-ške/a-*:

- optional: base forms = *-ške/a-* → derivation!
- **BUT** “The use of the marked imperfective stem is virtually obligatory with distributive expressions such as UD-*at* UD-*at* ‘day after day’, ITU-*mi* ITU-*mi* ‘month after month’ ...” (Hoffner & Melchert 2008: 320)
- incompatible with states and adverbs ‘X times’



The Hitt. suffix *-ške/a-*

- **Actional hypothesis:** *-ške/a-* changes the *Aktionsart* of the verb 'iterative-durative' (Sommer & Ehelolf 1924: 21-22, Gusmani 1965: 79), 'iterative' (Pedersen 1938: 132) 'distributive' (Neumann 1967: 24), 'iterative-durative-distributive' (Friedrich 1960, Rosenkranz 1966), 'durative-distributive' (Kammenhuber 1969: 217), 'iterative-durative-intensive' (Kronasser 1966)
- **Aspectual hypothesis:** *-ške/a-* = imperfective vs. neutral base forms
- **Pluractional hypothesis:** *-ške/a-* is a pluractional marker (Dressler 1968, Inglese & Mattioli 2020)



Functions of *-ške/a-*

CONTINUATIVE

<i>takku</i>	LÚ- <i>aš</i>	GU ₄ =ŠU	ÍD- <i>an</i>	<i>zī-nu-ški-zzi</i>
if	man:NOM	ox=3SG.POSS	river:ACC	CROSS-CAUS-IPFV-PRS.3SG
<i>tamaiš=an</i>		šu[<i>wezzi</i>]		
other:NOM=3SG.ACC		push:PRS.3SG		

‘If a man is making his ox cross a river, and another man pushes him off (the ox’s tail)’ [KBo 6.2 ii 30, OH]

FREQUENTATIVE

<i>namma</i>	ÉRIN.MEŠ- <i>an</i>	MU- <i>ti</i>	MU- <i>ti</i>	<i>pi-ška-nzi</i>
then	troop:ACC	year:DAT	year:DAT	give-IPFV-PRS.3SG

‘And they will keep providing troops year after year’

[KUB 23.72+ obv. 18, MH]



Functions of *-ške/a-*

ITERATIVE

nu ^{LÚ}A.ZU *ḥukki-ški-zzi*

CONN physician invoke-IPFV-PRS.3SG

‘(Then gold-spear-man holds a plated spear, and a physician holds a sistrum. They march together), and the ‘physician’ repeats the invocations’
[IBoT 1.36 ii 46, MH]

HABITUAL

karū 1 MA.NA KÙ.BABBAR *pi-šk-er* *kinuna*

formerly 1 mine silver give-IPFV-PST.3PL now

20 GÍN KÙ.BABBAR *pāi*

20 shekel silver give:PRS.3SG

‘Before they used to give 1 mine of silver, now he gives 20 shekels of silver’

[KBo 6.2 i 10, OH]



Functions of *-ške/a-*

PLURALITY OF PARTICIPANTS

a. Plurality of objects

nu DUMU.MEŠ=ŠU *andan* ***zikiet***
CONN son(PL)=3SG.POSS inside put-IPFV-3SG.PST

‘(She coated baskets with oil) and she placed her sons (one after the other) therein’ [KBo 22.2 obv. 3, OH]

b. Plurality of S subjects (Agent)

mān LUGAL-*waš* *peran* ***šie-ška-nzi***
when king:GEN in.front.of shoot-IPFV-PRS.3PL

‘And when they shoot with their bows at the presence of the king (whoever wins, they give him wine to drink’ [KBo 3.34 ii 33, OH/NS]

c. Plurality of S subjects (Patient)

nu=wa *kinun=ma* *ammuk* *peran* ***akki-ški-ttari***
CONN=QUOT now=PTC 1SG.DAT in.front.of die-IPFV-PRS.3SG.MID

‘But now under my kingdom (lit. in front of me) people die (lit. it dies)’ [KUB 14.10+ i 12, NH]



Functions of *-ške/a-*

INTENSIVE?

š=an *ē-šši-(š)k-er*

CONN=3SG.ACC do-IPFV-IPFV-PST.3PL

‘(And then they took him away), they took ‘good care’ of him (so that he died)’

[KBo 3.34 ii 7, OH/NS]

SPATIAL DISTRIBUTIVE

nu wātar [IŠTU^{GIŠ}PA] duwan duwann=a pappara-ški-zzi

CONN water:ACC with staff here here=CONJ sprinkle-IPFV-PRS.3SG

‘And he sprinkles water here and there with the staff’ [KBo 12.40 ii 8, NS]

GENERIC IMPERFECTIVITY

ḥalkiš=wa maḥḥan NAM.LÚ.U₁₉.LU GUD UDU

grain:NOM=QUOT as human cattle sheep

ḥuitarr=a ḥūman ḥuiš-nuški-zzi

game(N):ACC=CONJ all:ACC.N live-CAUS-IPFV-PRS.3SG

‘Just as grain keeps all humans, cattle, sheep and wild game alive’

[KBo 4.2 i 58-59, NS]



Functions of *-ške/a-*

INCEPTIVE

šeš-(š)ki-ška-nzi=ya=at=za

sleep-IPFV-IPFV-PRS.3PL=CONJ=3PL.NOM=REFL

‘(The horses eat all night long) and they go to sleep’ [KUB 29.54 i 10, MH]

 Scarcely attested with **finite forms** but frequent in the analytic ‘supine’ construction [*dai/tiya-* ‘put’ + supine] ‘begin to...’:

nu=mu

CONN=1SG.DAT

‘They began to give me troops’

ÉRIN^{MEŠ}

troop(PL)

pe-ške-wan

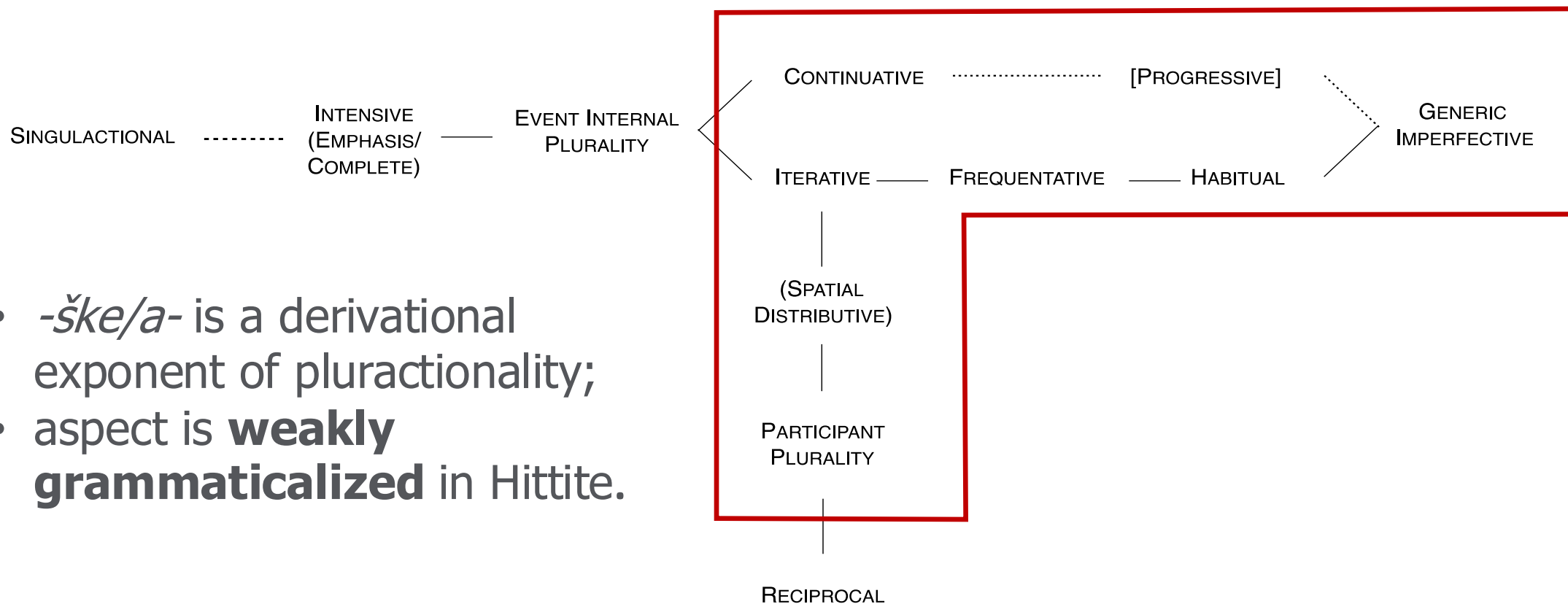
give-IPFV-SUP

dāir

put:PST.3PL

[KBo 3.34 iii 34, NH]

The semantic map of *-ške/a-*



- *-ške/a-* is a derivational exponent of pluractionality;
- aspect is **weakly grammaticalized** in Hittite.



Origin of *-ške/a-*

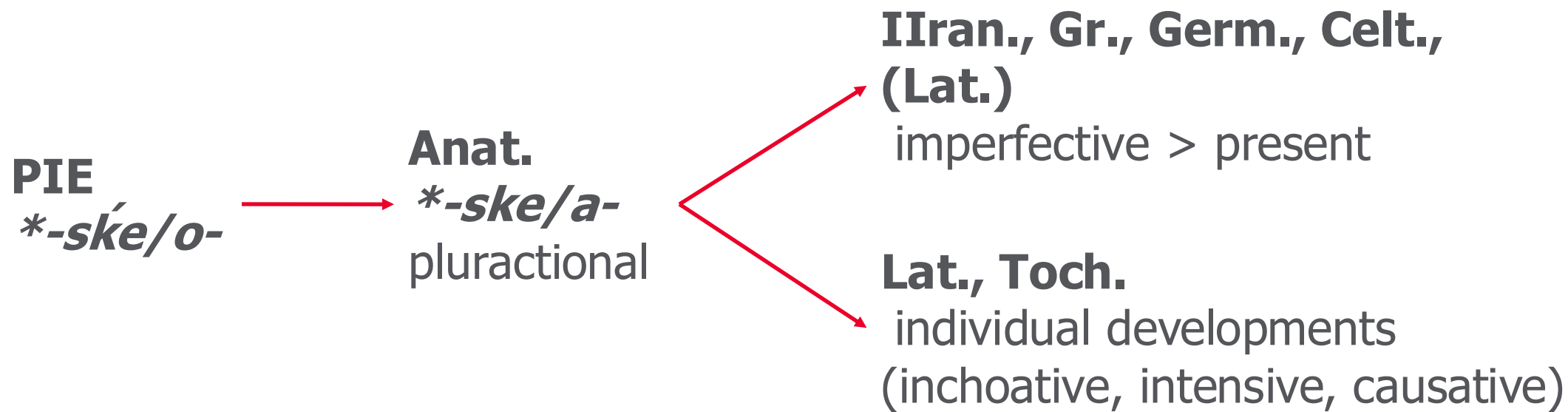
- Attested in other **Anatolian languages** (vd. Sasseville 2020: Cap. 13):
 - Cluw. *-zza-*, Hluw. *-za-*: similar to *-ške/a-*
 - Lycian *-s-*: no clear synchronic function
- *-ške/a-* < PIE **-ské/o-* (< **-s-ke/o-?* cf. Willi 2018: 480)
- **Presents** with zero grade root and accented suffix
**g^wem-`go'* > **g^wm̥-ské/ó* > Ved. *gácchati*, Gr. *báske*



Outcomes of PIE **-ské/o-*

- **Indo-Iranian:** Scr. *-ccha-*, Av. *-sa-*
present stem formant, Ved. *gácchati* 'goes'
- **Greek** *-ske/o-*
present stem formant, Gr. *báske*, *gignóškō* 'know'
- **Irish** *-c-*, **Germanic** *-sc-*: relic in present stem formation
- **Latin** *-sce/o-*
 - inherited presents (*noscō* = *gignóškō* 'know')
 - habitual traces? *esse* 'be' > *escit/escunt* 'will (habitually) be'
 - **inchoative forms** *caleō* 'be hot' > *calescō* 'become hot'
- **Tocharian B** *-ššə-/ske*: causative and intensive functions
(vd. **-éye/o-* iterative/causative, cf. Bozzone 2020)

The diachrony of PIE **-ské/o-*



“there seems no doubt, however, that Hittite preserves the original meaning and that meanings other than imperfectivity [i.e., pluractionality] are innovations.” (Adams 2014: 24–25)

Periphrastic and serial verb constructions



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Hittite auxiliary verb constructions

ḫark- ‘hold, keep’ + PTCP → default **NOM/ACC neuter**

nu=wa karuššijan ḫarak
CONN=QUOT be.silent.PTCP.NOM/ACC have.IMP.2SG

“Keep (being) silent!” (KUB 14.4 iv 11, NH/NS)

eš- ‘be’ + PTCP → **subject agreement**

n=at arḫa ḫarranteš ešer
CONN=3PL.NOM away damage.PTCP.NOM.PL be.PST.3PL

“They (sc. the birds that you sent to me) were spoiled.” (AT 125.12, NH/NS)

Hittite auxiliary verb constructions

memiyann=a=kan EGIR-*anda arḫa* UL *ištamaššan*
 thing.ACC=CONN=PTCL afterwards away NEG hear.PTCP.NOM/ACC
ḫarmi
 have.PRS.1SG

“And I have not heard afterwards about the matter.”

(KUB 31.121 iii 16–17, NH/NS)

[...] UL *arān* *ēsta*
 NEG rise.PTCP.NOM.N be.PST.3SG

“[...] had not risen.”

(KUB 14.16 i 21, NH/NS)

n=at *anzel* *iwar* EGIR-*pa* UL *kuiški*
 CONN=3PL.ACC.N 1PL.GEN like back NEG INDF.NOM
newaḫḫa[n *ḫart]a*
 renew.PTCP.NOM/ACC have.PST.3SG

“And no one has renewed them like us.”

(KUB 17.21 + i 17, MH/MS)



Aux + vb sequence
not interrupted!



Stative constructions

- with telic/atelic verbs
- only available interpretation with **imperative** verbs!

GAM-*an kaninanza ēšdu*

under crouch.PTCP.NOM be.IMP.3SG

“Let him be crouched down.”

(VBoT 120 ii 17–18, MH/NS)

nu=mu DINGIR^{LUM} ištamanan lagan

CONN=1SG.DAT god ear.ACC bend.PTCP.NOM/ACC

ḥark

have.IMP.2SG

“O god, keep your ear inclined to me.”

(KUB 24.1 i 16–17, NH/NS)

nu=wa karuššīyan ḥarak

CONN=QUOT be.silent.PTCP.NOM/ACC have.IMP.2SG

“Keep (being) silent!”

(KUB 14.4 iv 11, NH/NS)



Periphrastic perfect = anterior

nu=wa=za karū 30 É^{TUM} ašešan
CONN=QUOT=REFL already 30 house(ACC) settle.PTCP.NOM/ACC

ḥarzi

have.PRS.3SG

“[Pihinakki is occupying the town of Lipisira] and he has already settled 30 houses.”
(HMK 10 rev. 6, MH/MS)

n=aš mān karū pānza
CONN=3SG.NOM if already go.PTCP.NOM

“And if he has already/formerly gone.”
(HKM 75, 23–24, MH/MS)



Periphrastic perfects are AVCs

Clitics governed
by *ḥark-/eš-*

nu=war=aš=za

naḥḥān

ḥardu

CONN=QUOT=3SG.NOM=REFL be.fearful.PTCP.NOM/ACC have.IMP.3SG

“He shall behave respectfully [*lit.* keep being respectful].”

(KUB 36.118 8, MH/MS)

GAM-an kaninanza

ēšdu

under crouch.PTCP.NOM be.IMP.3SG

“Let him be crouched down.”

(VBoT 120 ii 17–18, MH/NS)

n=aš

mān karū pānza

CONN=3SG.NOM if already go.PTCP.NOM

“And if he has already/formerly gone.”

(HKM 75, 23–24, MH/MS)



ħark- and *eš-* as auxiliaries

išħēniu(š)=šmaš=kan UMB[IN^{MEŠ}=y]a *dān*
hair(N).NOM=3PL.DAT=PTCL nail(PL)=CONJ take.PTCP.NOM.N
ēšdu *parkuwa=ya* TÚG^{HI.A} *waššan*
be.IMP.3SG clean.ACC.PL.N=CONJ cloth(N.PL) wear.PTCP.NOM/ACC
ħarkandu
have.IMP.3PL

“Let their hair and nails have been cut, and let (them) have put on clean clothes.”
(translation by Garrett 1996: 104. KUB 13.4 i 16 MH/NS)

Auxiliary selection: *ħark-* with transitive/unergative vbs. and *eš-* with unaccusative



Origin of *ħark*- constructions?

- **Possessive** origin (like Romance *have*-perfects):

Multa bona bene parta habemus (Plautus, *Trin.* 347)
Many goods well obtained we-have
'We possess many well obtained goods.'

BUT: not compatible
with lack of agreement

- **Adverbial** origin:

menahħanda ħark- "to keep in front, to consider"
arahzanda ħark- "to keep surrounded, to protect"
arħa ħark- "to keep away"

BUT: no evidence of n/a.n
participles in adverbial
function elsewhere!



The Hittite 'serial' constructions

+ biclausal
+ motion

- (1) DUMU^{MEŠ}.É.GAL *appa panzi* *ta=z* *AŠAR-ŠUNU* *appanzi*
 palace_servants back go.PRS.3PL conn=refl place=their take.PRS.3PL
 'The palace servants go back and take their places.' (KBo 20.8 i 20')

- biclausal
± motion

- (2) *nu=za* *panzi* *AŠAR-ŠUNU* *appanzi*
 CONN PTC go.PRS.3PL place=their take.PRS.3PL
 'They (go) take their places.' (KBo 4.9 v 45)

- biclausal
- motion

- (3) GIM-*an=ma=za* *uit* ŠEŠ-YA ^mArnuwandaš DINGIR^{LIM}
 when=CONN=REFL come.PST.3SG brother=m A.nom god
kišat
 become.PST.3SG.MID
 'When my brother Arnuwanda (came) became god (=died).'



SVCs in IE languages and PIE?

age abduce hasce intro quas mecum adduxi, Stiche.

Go take these (women) I've brought with me indoors, Stichus. (Pl. *St.* 418)

īt=war ašta pargamuš ḪUR.SAG.DIDLI.ḪI.A-*ašaš šāḫ*

Go search the high mountains. (KUB 17.10 i 24–5)

uwatten ^{URU}*Nēša paiwani*

Come, let us go to the city of Nesa. (KBo 22 Ro 15)



Formal aspects: clitics

clitics are goverbed
by the final verb and
not by *pai-/uwa-*

paiweni=war=an=kan

kuennumeni

go.PRS.1PL=QUOT=3SG.ACC=PTC kill.PRS.1PL

'We shall (go) kill him.' (KBo 6.29 ii 24-26)

nu=za

panzi

AŠAR-ŠUNU

appanzi

CONN PTC

go.PRS.3PL place=their

take.PRS.3PL

'They (go) take their places.' (KBo 4.9 v 45)



Semantics of SCVs

“The construction indicates an event which is sequentially ordered following the event in the preceding clause.” → **new event marker**

paiweni=war=an=kan

go.PRS.1PL=QUOT=3SG.ACC=PTC kill.PRS.1PL

‘We shall (go) kill him.’ (KBo 6.29 ii 24-26)

kuennumeni

pai-

- controlled events
- + imperative/present
- ‘and then’

GIM-*an=ma=za*

uit

ŠEŠ-*YA*

when=CONN=REFL

come.PST.3SG

brother=1SG.POSS

^m*Arnuwandaš* DINGIR^{LIM} ***kišat***

A.NOM

god

become.PST.3SG.MID

‘When my brother Arnuwanda (came) became god (=died).’

uwa-

- ± controlled events
- + past
- ‘it happened that’

The origin of *pai-/uwa-* constructions

n=aš *URUAlmina* *andan* *pait*
 CONN=3SG. NOM A. into go.PST.3SG

'He went into (the town of) Almina.' (KBo 5.6 i 6)

nu ^DUTU-ŠI *paun* *nu=za* ḪUR.SAG *Tarikarimun* *kuiš* URU *Gašgan*
 CONN his_majesty go.PST.3SG CONN=REFL t.-mountain REL.NOM city k.ACC
ešan ḫarta *n=an* GUL-un
 occupy.PTCP have. PRT.3SG CONN=3SG.ACC conquer.PST.1SG

'Then I, His Majesty, went; (h) and I attacked those (g) Kaskaean who had occupied the mountains of Tarikarimu.' (KBo 3.4 iii 57-66)

Original contexts: usage without PPs



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Voice domain

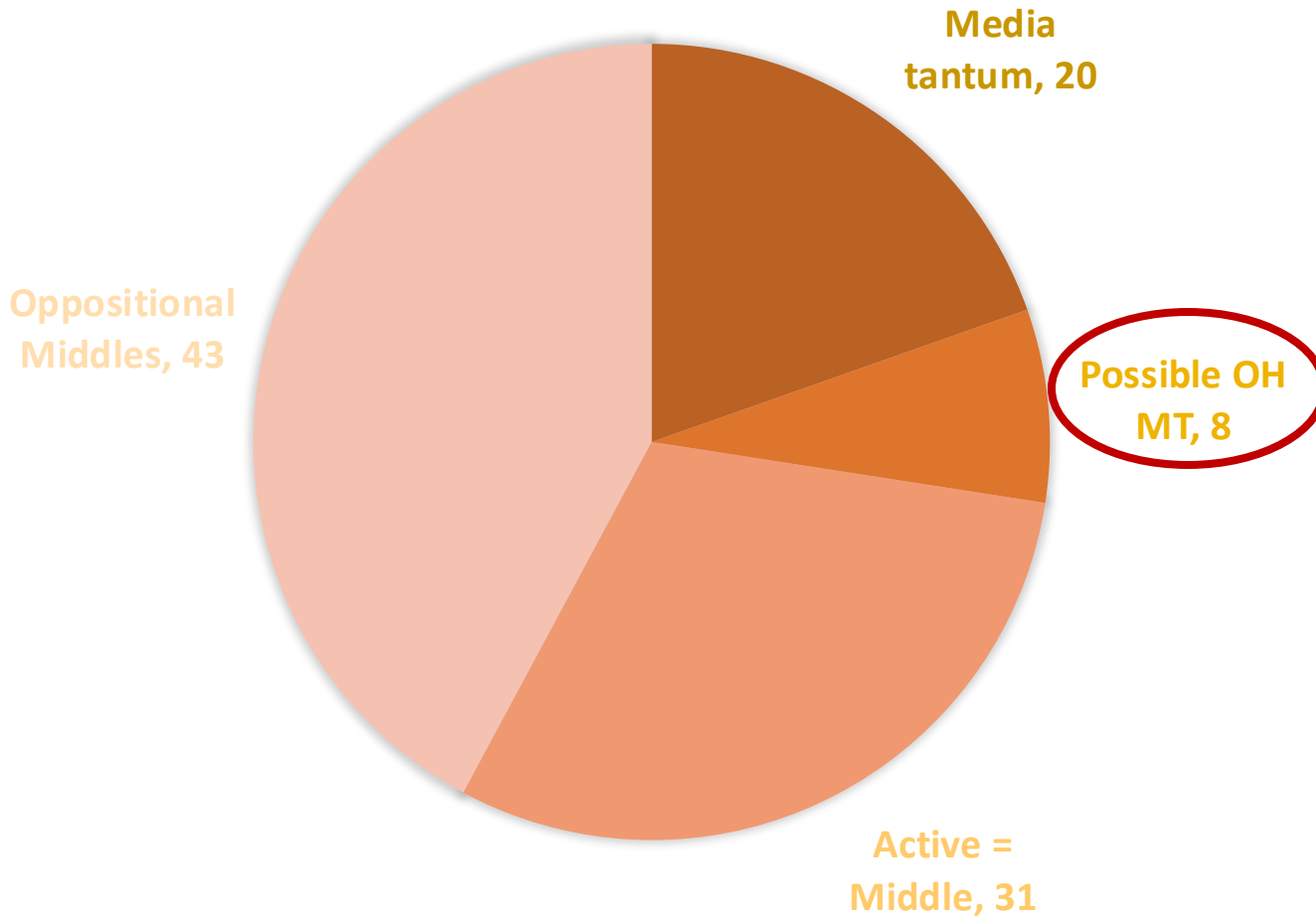
Inglese 2017, Inglese 2020

The classification of Hittite middles



- 1. Non-oppositional**, or *media tantum*: verbs that only occur in the middle voice.
- 2. Oppositional**: verbs that inflect in the middle voice to indicate a functional opposition with active transitive counterparts.
- 3. Optional**: verbs that occur both in the active and in the middle voice without any synchronically distinguishable functional motivation.
- 4. Lexicalized**: active and middle forms show different meanings.

Hittite middles in originals



Problems in identifying MT:

Limitations of the OS corpus: some verbs show active inflection in post-OH only!

OH *paršia* 'break' → NH *paršiyami*
 OH *zaḥḥanda* 'hit each other' →
 MH *zaḥ-i* 'hit'

1. Non-oppositional middles

BASE

ar-tta(ri) 'stand'

eš-a(ri) 'sit down'

hišwai-tta(ri)? '(be) open'

ye/a-tta(ri) 'go, march'

ištu-ā(ri) 'get out, become known'

ki-tta(ri) 'lie, be laid'

kīš-a(ri), kikkīš-tta(ri) 'become, happen'

kišt-ā(ri) 'perish'

tarra-tta(ri) 'be able, can (+ inf.)'

tukk-āri 'be visible, be important'

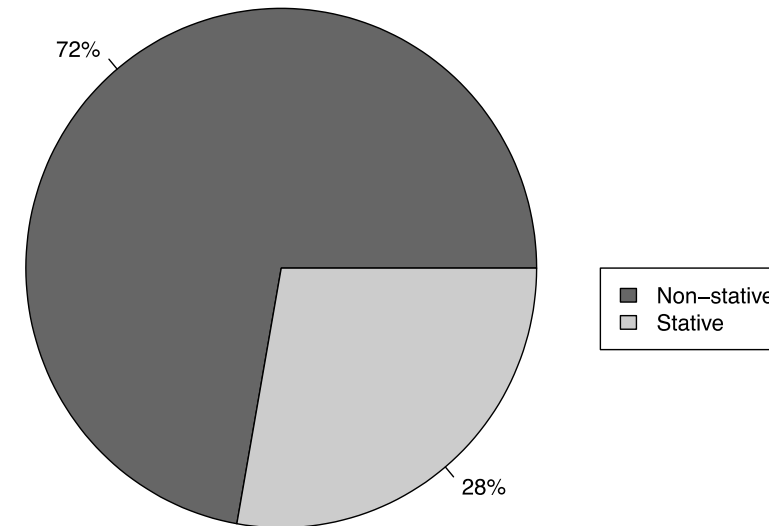
ur-āri, war-āri 'burn'

wakk-āri 'be lacking'^a

wešš-tta 'wear'

zē-a(ri) 'cook (intr.)'

- Neu (1968b: 117-119): are 'original' MT connected with **stativity**?



- 'Original' MT connected with **intransitivity**?
→ OH MT include transitive (deponents) verbs: *parš(i)-* 'break'

2. Oppositional middles

Oppositional middle forms can have different functions when they enter a pattern of **voice alternation** (Hoffner & Melchert 2008, Luraghi 2012, Melchert forthc.):

Function	Active	Middle
ANTICAUSATIVE	<i>zinni-zi</i> ‘bring to an end’	<i>zinna-tta(ri)</i> ‘come to an end’
PASSIVE	<i>tamāšš-zi</i> ‘oppress’	<i>tamāšš-ta(ri)</i> ‘be oppressed’
RECIPROCAL	<i>zaḥḥ-i</i> ‘hit’	<i>zaḥḥanda</i> ‘they hit each other’
REFLEXIVE	<i>šuppiyaḥḥ-i</i> ‘purify’	<i>(=za) šuppiyaḥḥ-(tt)a(ri)</i> ‘purify oneself’

Anticausative middles

- (1) ACTIVE TRANSITIVE VERB = INDUCED EVENT

maniyaḥinn=a *tuk* ***zinnit***

administration.ACC=CONJ 2SG.DAT finish.PST.3SG

“He brought the administration to completion for you.” (KBo 321 ii 1, OH/NS)

- (2) MIDDLE INTRANSITIVE VERB = PLAIN EVENT

[kui]tman=ma *gimmanza* *nāwi* ***zinnat[tat]***

until=PTC winter.NOM not.yet finish.PRS.3SG.MID

“And before winter is over.” (KBo 2.5 iv 11, NH/NS)

Decausative vs. autocausative

Distinction proposed by Geniušienė (1987: 86–89) and Haspelmath (1987: 27)

Autocausative: Hittite (Indo-European; Inglese 2020:511,509)

- a. *n=ašta* ^{GIŠ}*hulugannin* *EGIR-pa* *neyanzi*
CONN≠PTC cart.ACC back turn.PRS.3PL

‘And they turn the cart back.’

- b. *LÚ.MEŠ* *ḪÚB.BÍ* *nēanda*
dancer(PL) turn.PRS.3PL.MID

‘The dancers turn around.’

± control

Passive middles

(1) ACTIVE = TRANSITIVE

man KUR-*i* LÚ^{KÚR} ŪL *dammišḥaizzi*

IRR land.ACC enemy NEG damage.PRS.3SG

“The enemy would not damage the land.” (HKM 46.15-17, MH/MS)

(2) MIDDLE = PASSIVE

n=at *lē* *dammišḥaittari*

CONN=3SG.NOM.N NEG damage.PRS.3SG.MI

“It should not be damaged.” (HKM 31 v 11-12, MH/MS)

The Agent in the passive voice

nu-wa KUR URU *Hatti* *ḥinganaz* *arumma*
 CONN=QUOT land H. plague.ABL very
mek[ki] *tamaštat*
 much oppress.PST.3SG.MID

“And the land of Hatti was severely oppressed by the plague.” (KUB 14.10
 i 7, NH/NS)

- Agents are only compatible with passives, never with anticausatives
- Expressed via the instrumental or ablative case, the Akk. prep. *IŠTU*, or the Sum. TA

TABLE 18 Agent expressions with passive middles

	OH	MH	NH	Total
Oblique Agent	–	Inanimate: – Animate: 1	Inanimate: 16 Animate: 8	25
Agent omitted	6	18	173	197

Passive/anticausative polysemy

- (1) *n=an* *huišwandan* *šarranzi*
CONN=3SG.ACC live.PTCP.ACC split.PRS.3PL
“They split them up (into groups) alive.” (KUB 9.3 iv 8-9)
- (2) *namma=aš* *arḥa* *šarrattari*
again=3SG.NOM away split.PRS.3SG.MID
“(The enemy arrives at night) and then splits up.” (KBo 5.6 i 22-23)
- (3) $TU_7^{HI.A}$ *takšan* *šarrattari*
stew(PL) in.half split.PRS.3SG.MID
“The stews are split in half.” (KUB 20.76 i 15)

Reflexive middles

(1) ACTIVE = TRANSITIVE

nu LUGAL-*un* ***šuppiyaḥḥi***

CONN king.ACC purify.PRS.1SG

‘And he purifies the king.’ (KBo 17.11+ i 40)

(2) MIDDLE (WITH =ZA) = REFLEXIVE

a. LUGAL-*uš=za* ***šuppiyaḥḥati***

king.NOM=REFL purify.PST.3SG.MID

‘The king has purified himself.’

(KBo 25.112 ii 14)

b. *it* ***šuppiaḥḥut***

go.2SG.IMP purify.2SG.IMP.MID

‘Go, purify yourself!’

(KBo 3.16 iii 8)

The self-benefactive middle

1) *autoû nauilloménoisi édōke khōrous enidrúsasthai bōmoùs kai teména theoîsi*

'To the sailors who arrived there [the king] granted spaces space to build temples and sanctuaries for their own gods.' (Hdt. 2.178.1) cf. *enidrúō* 'build'

2) *yó yájāti yájāte ít* (RV 8.31.1)

'Whoever sacrifices to the god on his own or someone else's behalf.'

«The self-beneficent meaning was one of the **main functions** of the Vedic, and, in general, ancient Indo-European middle (presumably going back to the proto-language).»
(Kulikov 2008: 172)



unattested in Hittite!

Reciprocal middles

(1) ACTIVE = TRANSITIVE

[...] ^{URU}*Tuḥašunan* ***zaḥḥer***
T.ACC hit.PST.3PL

"[...] they hit the town of Tuhasuna." (KUB 17.21 iv 2, MH/MS)

(2) MIDDLE = RECIPROCAL

takku LÚ^{MEŠ} ***zaḥḥanda***
if man(PL) hit.PRS.3PL.MID

"If (two) men strike each other (and one of them dies)." (KBo 6.26 ii 16, OH/OS)

Middle voice and reciprocity

Voice alternation and **grammatical reciprocals**

Verb	Active	Middle
<i>ep-</i>	'take'	'take each other'
<i>=za šāi-</i>	'become angry'	'quarrel'
<i>zaḥ-</i>	'hit'	'hit each other'

- **Reciprocal *media tantum***: *zaḥḥiye/a-* 'fight', *parḥ-* 'chase' (?)
- Voice alternation with **spatial lexical reciprocals** → reciprocal anticausatives!

Table 2: Spatial reciprocals and middle voice

Verb	Active	Middle
<i>ḥamenk-</i>	'bind'	'be bound'
<i>ḥantae-</i>	'align (tr.)'	'align (intr.)'
<i>ḥapp-</i>	'attach'?	'be attached to someone'
<i>ḥapuwai-</i>	'bind'	'be bound'
<i>ḥarp-</i>	'join (tr.), to pile up'	'join (intr.)'
<i>anda imiya-</i>	'mix (tr.)'	'mix, mingle (intr.)'
<i>išḥia-</i>	'bind'	'be bound'
<i>lamm-</i>	-	'mingle (intr.)'
<i>lišša-</i>	'gather (tr.)'	'gather (intr.)'
<i>šārr-</i>	'split (tr.)'	'split (intr.)'
<i>šišša-</i>	*'throw'	'collide'
<i>takš-</i>	'mix (tr.)'	'mix (intr.)'
<i>tamenk-</i>	'join (tr.)'	'join (intr.)'
<i>tarupp-</i>	'gather (tr.)'	'gather (intr.)'
<i>ullai-</i>	-	'mix (intr.)'

Voice alternation as intransitivization

ANTICAUSATIVE

ped[e]=šš^vi=ya=at=kan

lē

place.DAT=3SG.POSS.DAT=CONJ=3SG.NOM.N=PTC

NEG

niniktar[i]

raise.PRS.3SG.MID

“(Behold, I have fixed in place the king’s oath, curse, blood and tears [...]) let it not come loose in its place.” (KBo 24.4+ rev. 7–10, NS)

REFLEXIVE

n=aš^vza munnaittat

CONN=3SG.NOM=REFL hide.PST.3SG.MID

“(When Anu finished talking, he went up to the sky,) and hid himself.”
(KUB 33.120 i 38, MH/NS)

Voice alternation as intransitivization



PASSIVE

n=at

wemiya[t]taru

CONN=3SG.ACC.N

find.IMP.3SG.MID

“(And the reason for which people die,) it should be found out!” (KUB 14.10 iv 19, NH/NS)

RECIPROCAL

nu=war=at=za=kan

šāntati

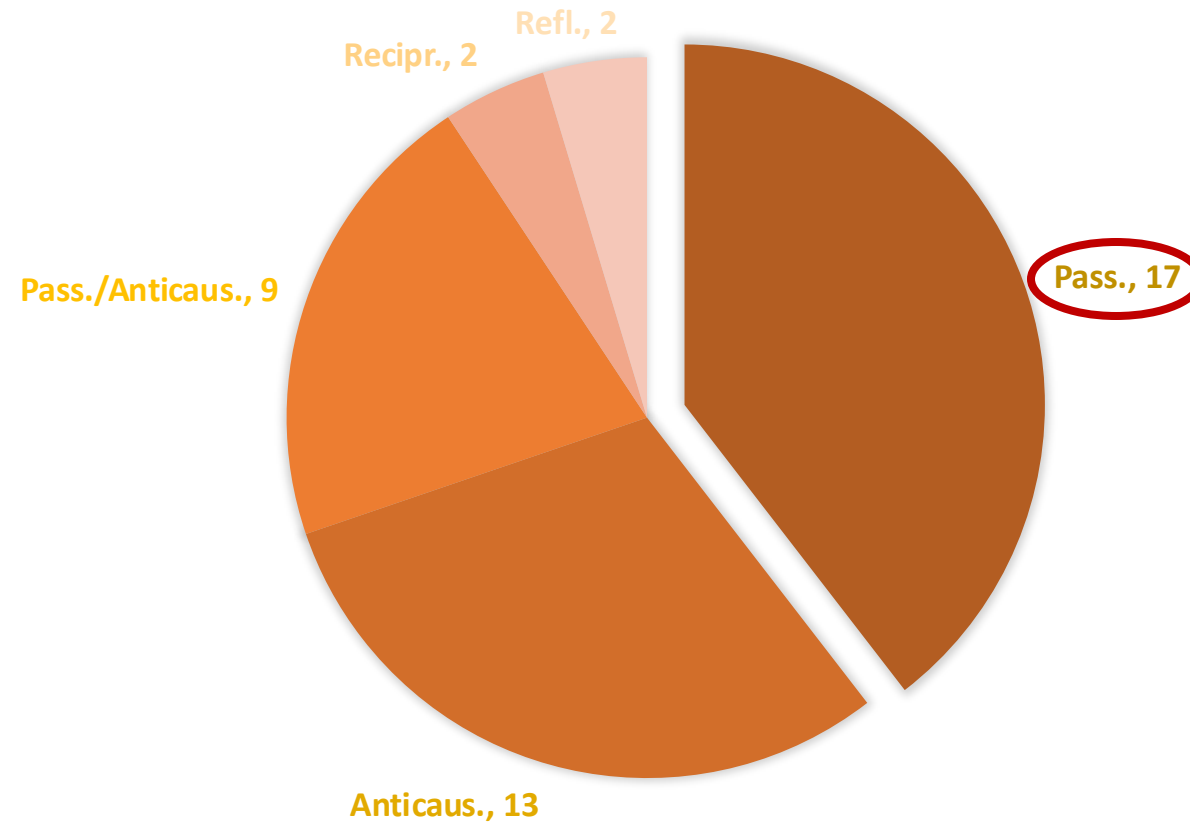
CONN=QUOT=3PL.NOM=REFL=PTC

become.angry.PST.3PL.MID

“They became angry at each other.” (KUB 12.26 ii 1–3, NS)

Oppositional middle in the corpus

FUNCTIONS OF THE MIDDLE (TYPE FR.)

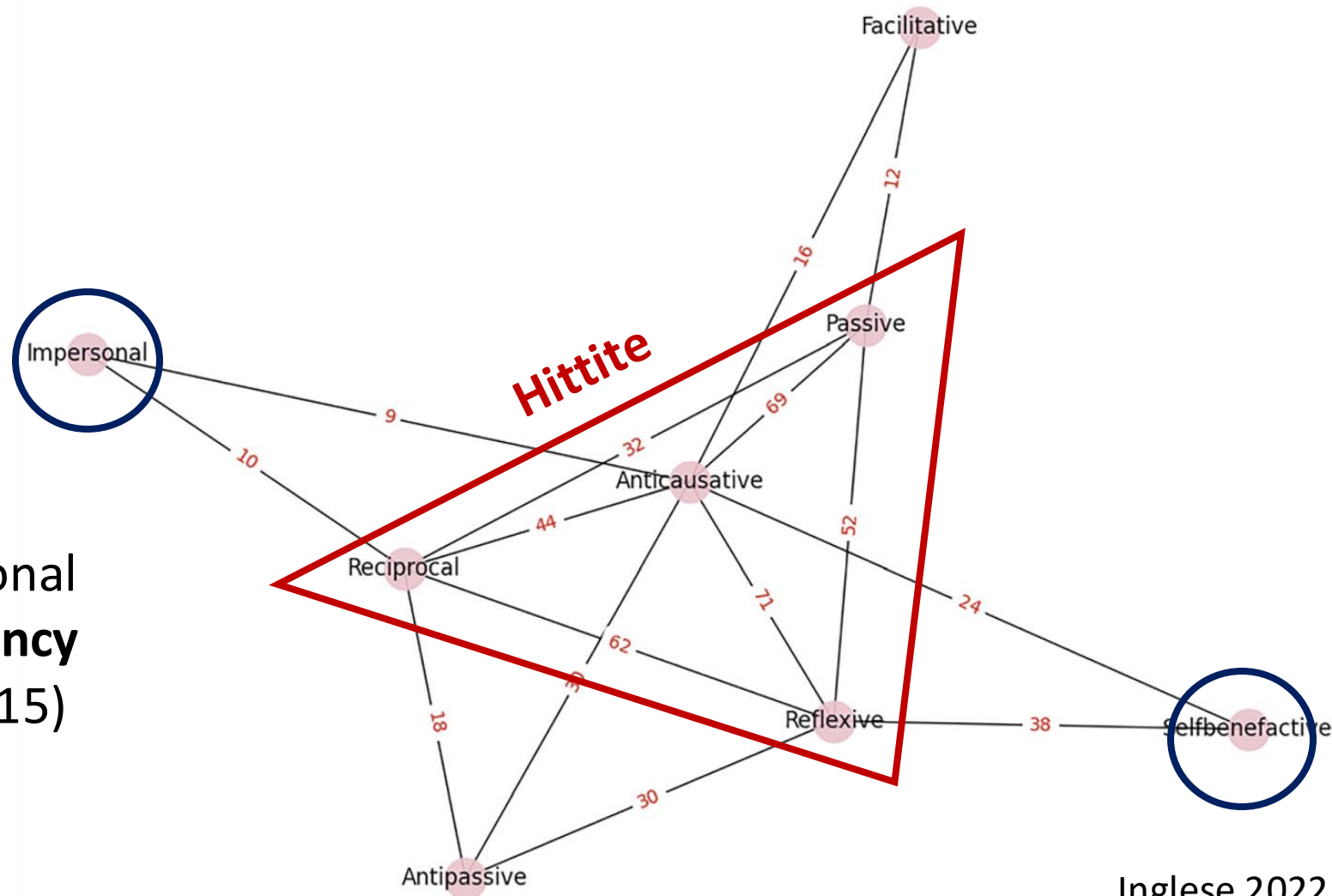


Voice syncretism



«Voice syncretism refers to formal verbal marking shared by two or more voice operations»
(Bahrt 2021)

The middle voice (in its oppositional function) is a **verb-sensitive valency changing marker** (Malchukov 2015)



The classification of Hittite middles



1. **Non-oppositional**, or *media tantum*: verbs that only occur in the middle voice.
2. **Oppositional**: verbs that inflect in the middle voice to indicate a functional opposition with active transitive counterparts.
3. **Optional**: verbs that occur both in the active and in the middle voice without any synchronically distinguishable functional motivation!
4. **Lexicalized**: active and middle forms show different meanings

3. Optional middles

Both active and middle forms of the verb occur in the corpus with **no difference** in syntax and semantics

[*kuitman*]*n* *nekuzzi*

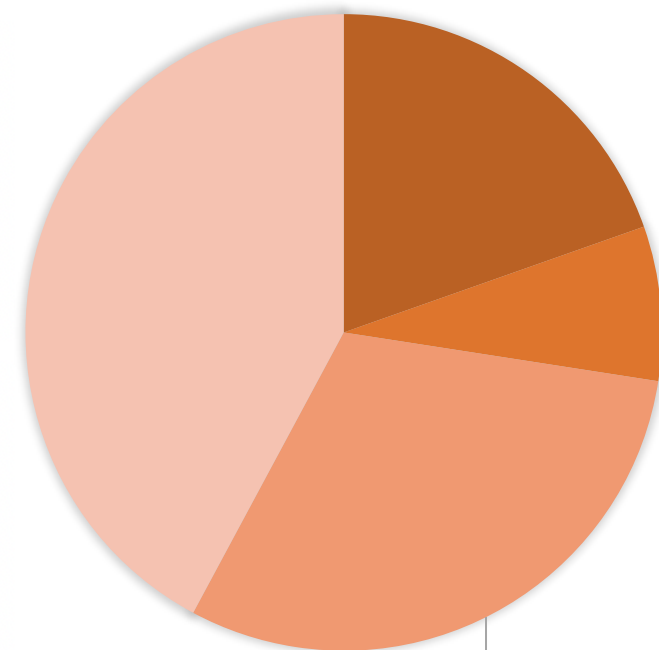
until become.evening.PRS.3SG

“While the evening is coming on (but the Sun is still up).” (KBo 15.22 8, NS)

maḥḥan=ma *nekuttat*

when=PTC become.evening.PST.3SG.MID

“When the evening came (I turned around and went against ..., and I marched all night)”. (KBo 5.8 iii 19–21, NH/NS)



Optional; 31

4. Lexicalized middles

	Active	Middle
<i>hai(n)k-</i>	'offer'	'bow'
<i>weriye/a-</i>	'call'	'join'
<i>usneske/a-</i>	'pledge, balance'	'put up for sale'

The middle voice in Old Hittite

Crucial stage: OH is the baseline for the comparative study of the middle voice in PIE as well as for the perspective history of the middle down to NH.

	Media tantum	Oppositional middles	Optional
OH	27 (73%)	7 (19%)	3 (8%)

- What is the rationale behind the **distribution** of **MT**?
- What are the **functions** performed by **oppositional** middles?

OH *media tantum*

- No straightforward **functional motivation**: most MT are unaccusative change-of-state events, but this type of predicate can also occur in the active voice

kišt-a(ri) 'perish' vs. *ak-i* 'die'

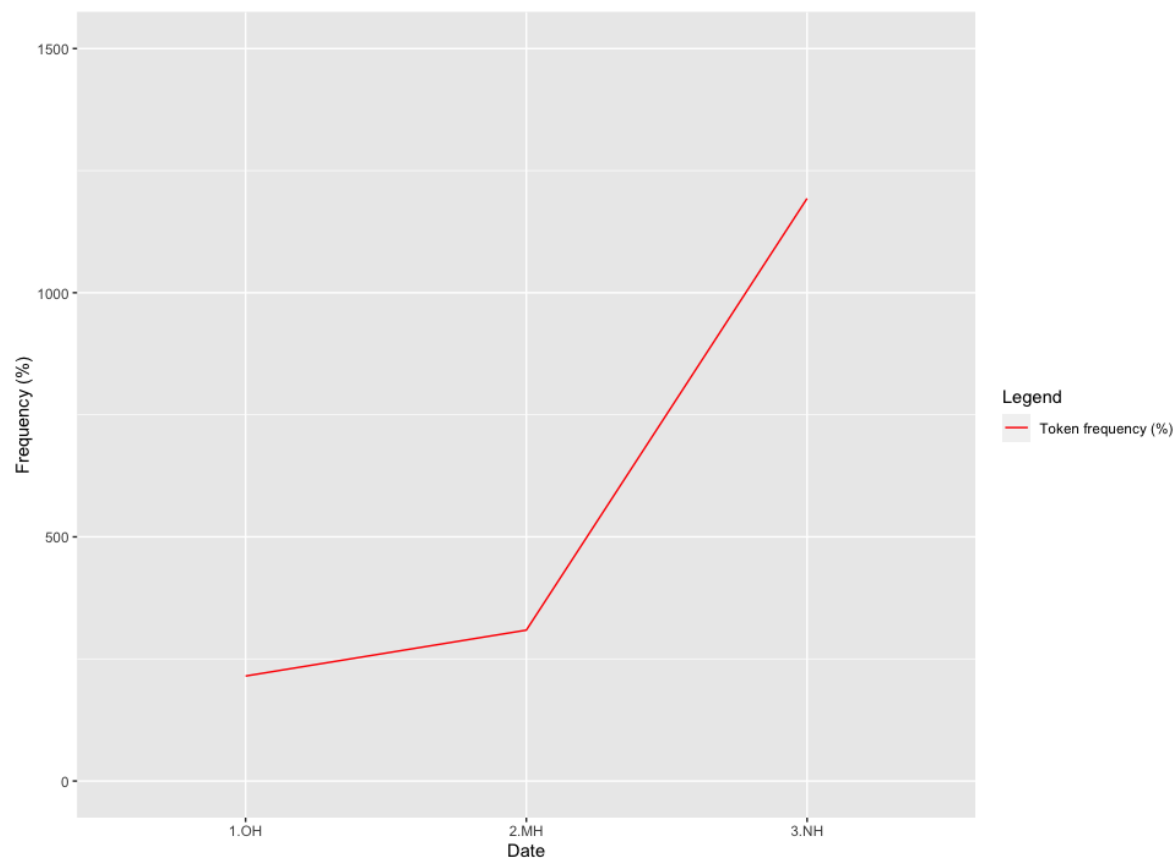
- **Etymology**: is the middle voice of MT simply inherited from PIE?
 - **Inherited** formations: e.g. *ki-tta(ri)* 'lie' (Gr. *keîmai* 'lie')
 - **Unclear** cases: lack of PIE etymology, e.g. *thus-a(ri)* 'cut', or non-middle cognates, e.g. *ur-āri* 'burn' vs. OCS *vireti* 'cook'
 - **New** Hittite formations: *irmaliye/a-tta(ri)* 'be(come) ill' < *erman-* 'illness'

In OH, the distribution of voice is **not** entirely driven by **semantic/syntactic** considerations, but the middle must have been a **productive** pattern, as it is able to attract **new verbs**.

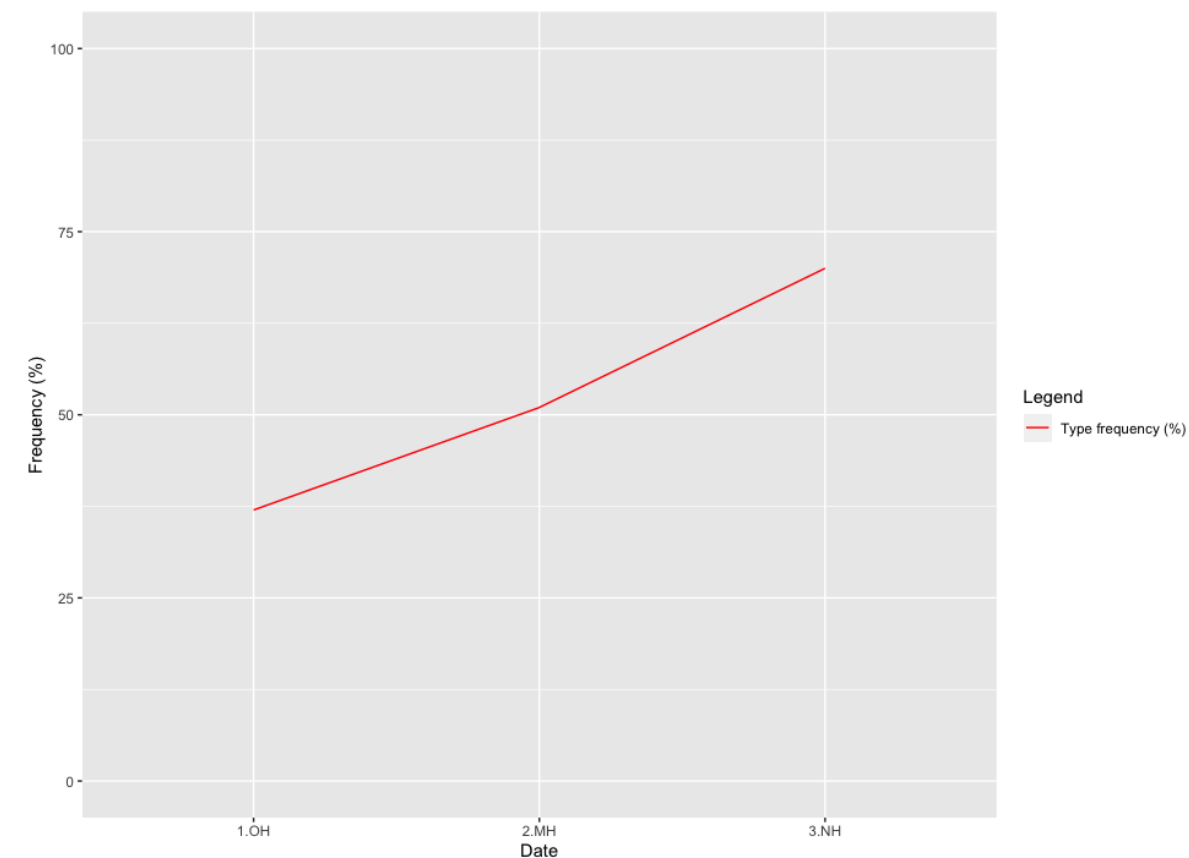
Oppositional middles in OH

- **Anticausative:** *hantae*^{-zi} 'align (tr.)' vs. *handai*^{-tta(ri)} 'align (intr.)'
- **Passive:** *markiye/a*^{-zi} 'refuse' vs. *markiye/a*^{-tta(ri)} 'be refused (mid.)'
- **Reflexive:** *suppiyahh*⁻ⁱ 'purify' vs. (=za) *suppiyahh*^{-ta(ri)} 'purify oneself'
- **Reciprocal:** *zahh*⁻ⁱ 'hit' (post-OS) vs. *zahh*^{-ta(ri)} 'hit each other'

From OH to NH: some numbers



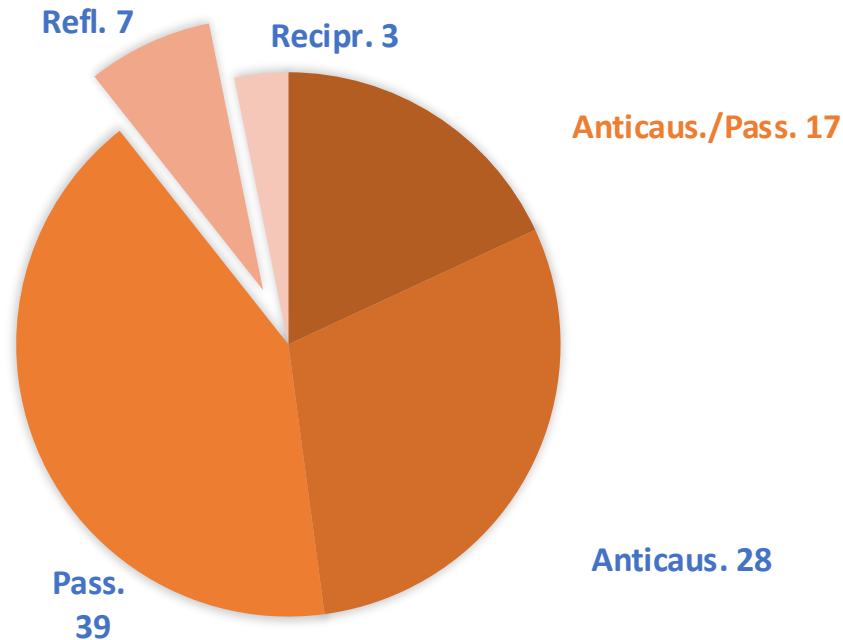
Token frequency



Type frequency

A reflexive origin of the Hittite middle?

1) Few reflexive middles



2) Competition with the 'reflexive' particle =za

- a. *nu=za* 6-ŠU *walḫanzi*
CONN=REFL six.times hit.PRS.3PL
‘They beat themselves six times.’ (KUB 1.14 ii 8)
- b. LUGAL-*uš=za* *šuppiyaḫḫati*
king.NOM=REFL purify.PST.3SG.MID
‘The king has purified himself.’ (KBo 25.112 ii 14)

Oppositional vs. non-oppositional middles



	<i>Media tantum</i>	Oppositional	Optional
OH	27 (73%)	7 (19%)	3 (8%)
MH	16 (30%)	19 (37%)	17 (33%)
NH	13 (18%)	32 (45%)	26 (37%)

The demise of *media tantum*

- The class of *media tantum* is not **productive**! Even in NH, most 'new' MT do have a good PIE etymology, so they are likely to be inherited.
- Two factors alter the **distribution** of MT:
 - Deponents (e.g. *tuhs-a^(ri)* 'cut') and *-ske/a-* intransitives (e.g. *paiske/a-tta^(ri)* 'go') are **analogically transferred** to the active inflection (thus enlarging the A=M class).
 - Old *media tantum* develop **active oppositional** counterparts, e.g. *lazziye/a-tta^(ri)* 'be(come) good' (OH) > *lazziye/a-zi* 'set straight' (NH).

The rise of optional marking

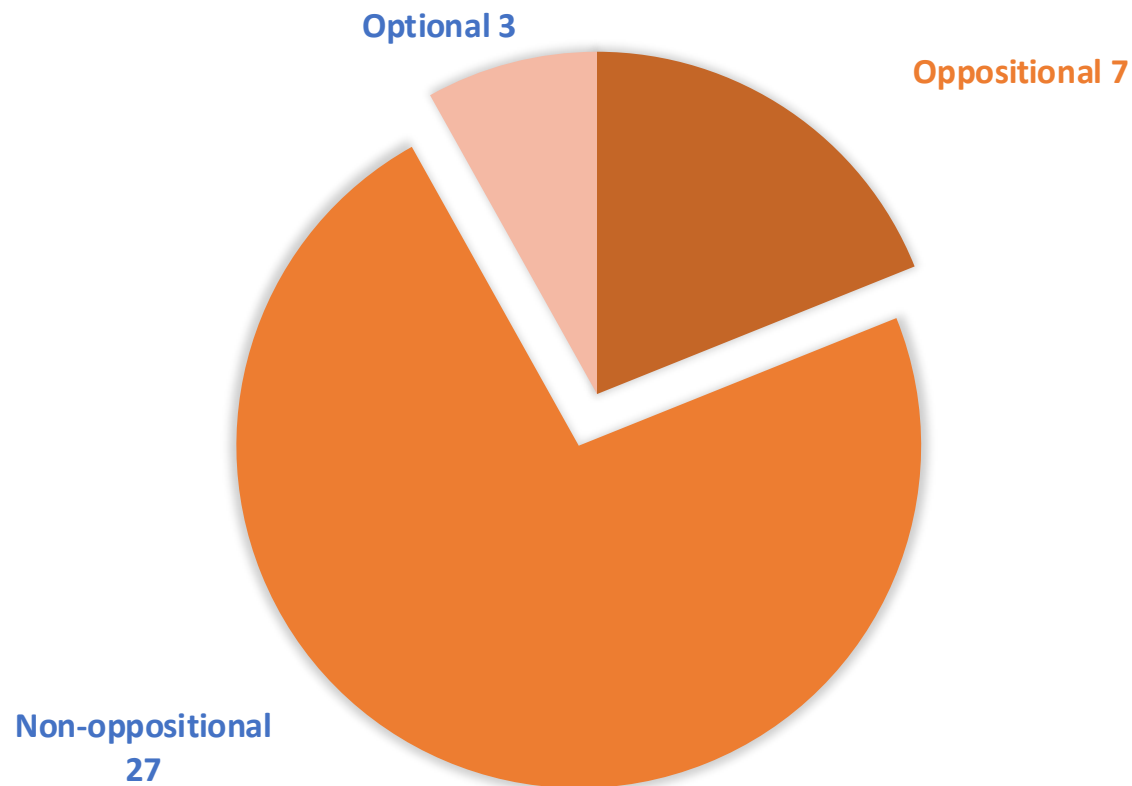
- The **chronology** of active and middle forms shows that either voice is older/original → voice fluctuations are **secondary**!
- The rise of voice fluctuation is the result of **analogy**:
 - **Systematic transfer**: deponents (e.g. *tuhs*-^{a(ri)} ‘cut’) and -*ske/a*-intransitives (e.g. *paiske/a*-^{tta(ri)} ‘go’) → active inflection;
 - **Sporadic transfer**: unaccusative intransitive active verbs → middle inflection; on analogy to semantically close MT, e.g. active *huwai*- ‘run’ sporadically middle analogically to *iye/a*-^{tta(ri)} ‘march’.

Chronology of oppositional middles

	ANTICAUSATIVE	PASSIVE	ANTIC./PASS	RECIPROCAL	REFLEXIVE
OH	3	2	0	1	1
MH	6	7	6	0	1
NH	9	13	8	1	0

Alternative scenario: stage I

Stage I: verbal voice was lexically determined (active alignment system?)



Stage II: the anticausative alternation

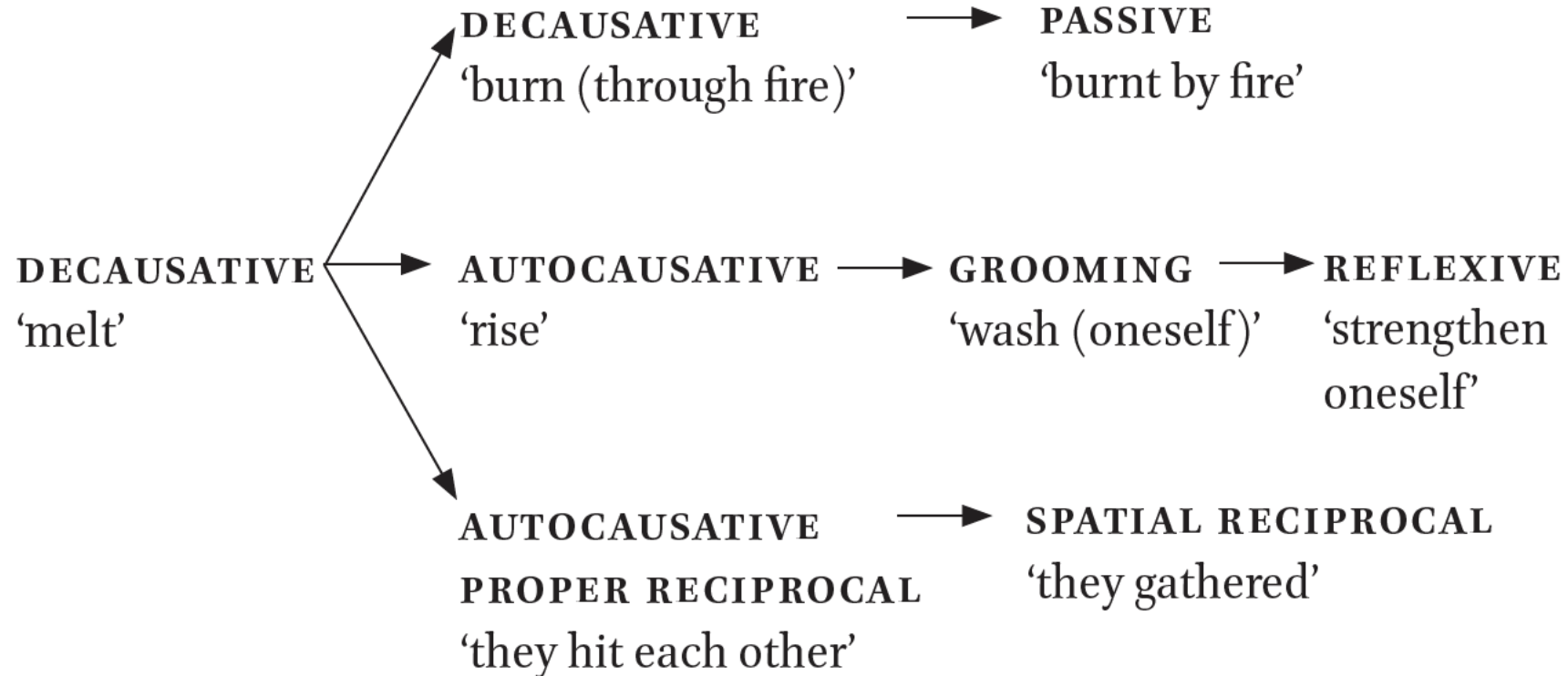
Among *media tantum*, the largest group includes uncontrolled states and **change-of-state events** (Luraghi 2012: 14-16): *kīš-a(ri)*, ‘become, happen’, *kišt-ā(ri)* ‘perish’, *lukk-tta* ‘get light, dawn’, *marrīye/a-tta(ri)*, *marra-tta(ri)* ‘melt, stew (intr.)’

Class	Verbs
Change in body posture	1
Positional verbs	2
Translational motion	3
Spontaneous events	10
Natural reciprocals	1
Transitive deponents	2
Other	1



- Emergence of **voice alternation** to express the **anticausative alternation**
- **Voice polarization:**
 - Active voice with typically transitive verbs;
 - Active voice with causatives of *media tantum* (*kist-ari* vs. *kista-nu-zi*);
 - Lexical pairs: *kīš-ari* ‘happen’ vs. *ye/a-zi* ‘cause to happen’.

Stage III: new oppositional functions



“[...] middle markers from **non-reflexive sources** will not develop into markers of reflexive semantics” (Kemmer 1993: 229)

Anticausative > reflexive

- a. [karitt]eš *nininkanta*
flood.NOM.PL raise.PRS.3PL.MID
'Floods will get moving.' (KUB 8.1 iii 21, NS)

Other **motion verbs**: *park(iye/a)-tta(ri)* 'raise (intr.)', *nē-a(ri)* 'turn (intr.)', and *weḥ-ta(ri)* 'turn'!

- b. *nu* *mān* LÚKÚR *kuiški* *niniktari*
CONN if enemy INDF.NOM raise.PRS.3SG.MID
'If some **enemy** mobilizes (and goes to attack these borders).' (FHL 57+ iii 46-47)

The possibility of **animate subjects** to occur with otherwise **decausative** verbs led to the expansion of the **autocausative** use, hence providing the natural bridging context to **reflexive** situations proper

Anticausative > reciprocal anticausative > reciprocal



[*kui*] *tman=ma* *gimmanza* *nāwi* *zinnat[tari]*
until=PTC winter.NOM not.yet finish.PRS.3SG.MID
“And before winter is over.” (KBo 2.5 iv 11, NH/NS)

Decausative

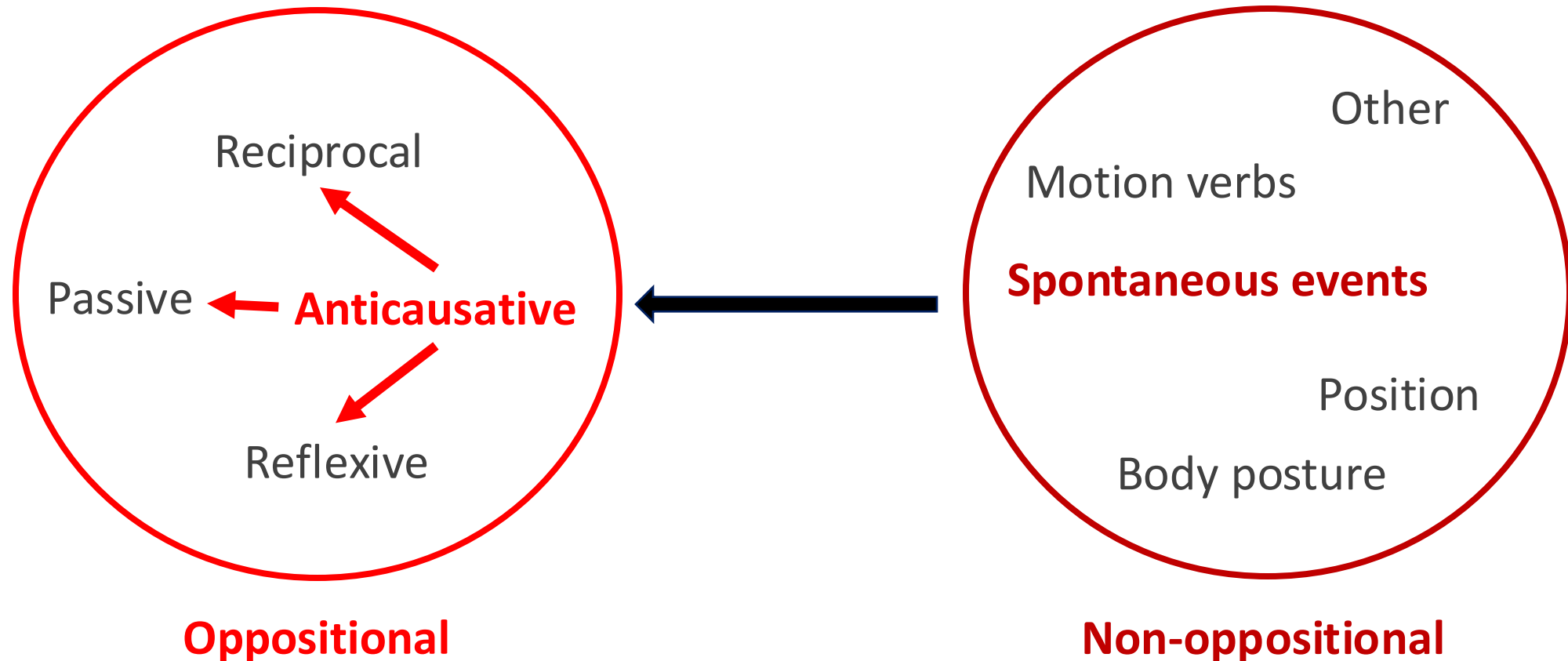
DINGIR^{MEŠ} *ya* *hūmanteš* *taruppantat*
god(PL)=CONJ all.NOM.PL gather.PST.3PL.MID
“The gods gathered all together.” (KUB 36.97 obv. 6, NS)

Reciprocal
anticausative

takku LÚ^{MEŠ} *zaḥḥanda*
if man(PL) hit.PRS.3PL.MID
“If (two) men strike each other (and one of them dies).” (KBo 6.26 ii 16,
OH/NS)¹⁴

Reciprocal

The diachrony of the Hittite middle



The paradigmaticization of voice

LEXICAL DISTRIBUTION	GRAMMATICAL DISTRIBUTION
verbs only occur in the active or in the middle voice	(transitive) verbs freely occur in both voices to indicate valency reducing operations

- **Paradigmaticization:** verbal voice becomes integrated as full-fledged inflectional category within verbal paradigms, as e.g. number, tense, mood. The same development took place in e.g. Indo-Aryan (cf. Lazzeroni 1990, 2004) and Ancient Greek (cf. Sausa 2016);
- **Paradigm regularization:** in NH the middle paradigm becomes increasingly regularized, e.g. expansion of *-ri* and *-ta* endings.

The causal-noncausal alternation

Grammatical alternation whereby languages encode events that are conceived as brought about by an external volitional entity as opposed to ones that are portrayed as coming about spontaneously.

Language	Verb pair		Operation
	Spontaneous	Externally caused	
Hittite	<i>ze-</i> 'cook (intr.)'	<i>za-nu-</i> 'cook (tr.)'	CAUSATIVIZATION
Hittite	<i>zinna-tta</i> 'finish (intr.)'	<i>zinna-i</i> 'finish (tr.)'	INDETERMINATE
Russian	<i>serdit'-sja</i> 'get angry'	<i>serdit'</i> 'make angry'	ANTICAUSATIVIZATION

Transitivizing morphology

-nu- and *-aḥḥ-* originally in complementary distribution as to the type of adjective stems (Oettinger 1979: 238-255)

- **'causative' -nu-** (Luraghi 1992):
 - intr. verb: *ar-* 'arrive' > *ar-nu-* 'cause to arrive' < PIE **-nu-/-neu-*
 - tr. verb: *zai-* 'cross' > *zinu-* 'let cross' *arnu-* = Skr. *ṛ-nó-ti* 'move'
 - adj.: *daššu-* 'strong' > *daš(ša)-nu-* 'make strong'
 - noun: *ešḥar-* 'blood' > *ešḥarnu-* 'make bloody'
- **'factitive' -aḥḥ-:**
 - *šuppi-* 'pure' > *šuppiaḥḥ-* 'purify' < PIE **-eh₂-*
 - *išḥiul-* (n.) 'treaty' > *išḥiuaḥḥ-* 'bind by treaty' *newaḥḥ-* = Lat. *novāre* 'make new'
- **nasal infixation:**
 - *ištark-* 'get sick' > *ištarnink-* 'make sick, afflict'
 - *nini(n)k-* 'raise, set in motion'

Transitivizing morphology

arḥaya=an=ma=kan

kanga-nu-mi

besides=3SG.ACC=CONN=PTC

weigh-CAUS-PRS.1SG

‘(I will build statue of Hattusili in silver) and I will also have it weighed.’ (KUB 21.27 iii 42)

takku LÚ-aš GU₄-ŠU ÍD-an zī-nu-škizzi

if man.NOM ox-his river.ACC cross-CAUS-PLUR.PRS.3SG

‘If a man is making his ox cross a river.’ (KBo 6.2 ii 30)

For adjectival bases: **equipollent** causal/noncausal alternation

idalu- ‘bad’ > *idaluw-ešš-* ‘become bad’ vs. *idal-ahh-* ‘make bad’

Causal/noncausal alternation

Lexical restrictions (van Lier & Messerschmidt 2022):

- **AGENT-ORIENTED MEANING COMPONENTS:** anticausativization is banned for verbs that lexicalize a specific causer/manner (Koontz-Garboden 2009)

	Voice alternation	Causative suffixation
Telicity	telic verbs	±telic verbs
Animacy	inanimate verbs	±inanimate verbs

based on Luraghi 2012

Periphrastic passive

GIŠTUKUL^{HL.A}-iš=wa=tta šiunit piyanteš

weapon.NOM.PL=QUOT=2SG.DAT god.INS give.PTCP.NOM.PL

“The weapons are given to you by the Gods.” (KBo 22.6+ i 25 OH²/NS)

ANA LUGAL KUR^{URU.dU}-tašša=at piyan

to king land T.=3SG.NOM.N give.PTCP.NOM.N

“It is assigned to the king of Tarhuntassa.” (Bronzetafel ii 7, NH/NS)

Copula + P-resultative participle > **passive** (vd. Lat. *amatus est*)

«The resultative is often similar to the passive in that it usually makes the patient the subject of the clause.» (Bybee et al. 1994: 54)

The 'reflexive' particle =za

Host	1	2	3	4	5	6
<ul style="list-style-type: none"> Accented word (+ =(y)a/(m)a/man) Connectives: <i>nu, šu, ta</i> 	=war	=naš =šmaš	=a-	=mu =ta/du =še/i	=z(a)	=an, =apa =ašta, =kan =šan

a. *n=an unuzzi*

CONN≠ACC.SG adorn:3SG.PRES.ACT

‘He_i adorns him_{ii}.’ (KBo 38.265 obv. 11’)

b. *unut=wa=z*

adorn:3SG.PRET.ACT≠QUOT≠REFL

‘He adorns himself.’ (KUB 31.143 obv. ii 23)

NB: =za < *=toi ‘to thee’ via Luwian (Yakubovic 2010)?

Other valency related functions

- Indirect reflexive/self-benefactive

NINDA-*an=za* *wemiyānūn*
bread.ACC=REFL find.PST.1SG

‘I found bread for myself.’ (KUB 30.10 obv. 16, OH/MS)

- Possessive (coreference possessor = subject)

nu=za DUMU.MUNUS.MEŠ=ŠA ANA DUMU.NITA.MEŠ=ŠA
CONN=REFL daughters=POSS DAT sons=POSS

paiš

give:3SG.PRET.ACT

‘She gave her daughters to her sons (in marriage).’ (KBo 22.2 obv. 17)

Other valency related functions

- **Autocausative**

nu=z ANA PANI EN-YA kuit šara ʔuittiyan ʔarkun

CONN=REFL to presence lord=1SG.POSS because up pull.PTCP.N/A. have.PST.1SG

'Given the fact that I had pulled up myself before my lord.' (KUB 19.23 obv. 9)

- **Antipassive?**

nu=za eter ekue[r]

CONN=REFL eat:3PL.PRET.ACT drink:3PL.PRET.ACT

n=ašta ^{DUG}palʔan ʔumandan ek[uer

CONN=PART p:ACC.SG.COM all:ACC.SG.COM drink:3PL.PRET.ACT

'They ate and drank (with =za); they drank off a whole p.-vessel (without =za), and they were/became sated' (KUB 17.5 i 10–12, NH)

Reciprocal =za

man=e=za idalaweššanzi

if=3PL.NOM=REFL become.evil.PRS.3PL

“If they have a falling out (lit. become evil at each other).”

(KBo 6.2 iii 8–11)

direct reciprocal

nu=za É-er takšan šarranzi

CONN=REFL house.ACC together split.PRS.3PL

“They shall split up the household equally among each other.”

(KBo 6.3 ii 19)

indirect reciprocal

weš=a=wa=za šarraweni

1PL.NOM=PTC=QUOT=REFL split.PRS.1PL

“We split up.”

(KUB 24.8 iv 5)

**autocausative
reciprocal**

Reciprocal =za



Table 4. Reciprocal constructions with the particle =za

Verb	Without =za	With =za
<i>idalawešš-^{zi}</i>	‘become evil’	‘quarrel’
<i>hurt-^{zi}</i>	‘curse’	‘curse at each other’
<i>šārr-^{zi}</i>	‘split (tr.)’	‘split (tr. indirect recip.)’
<i>ḥanna-^{ta(ri)}</i>	‘contest, judge’	‘quarrel’
<i>šarra-^{ta(ri)}</i>	‘split (intr.)’	‘split (intr.)’

=za in copular sentences

- **Non-third person subject** in nominal clauses:

nu=war=aš *LÚ-iš* *ešta*
CONN=QUOT=3SG.NOM man.NOM be.PST.3SG

uga=wa=z *UL imma* *LÚ-aš*
1SG.NOM=QUOT=REFL NEG besides man.NOM

‘He was a man, am I not a man, too?’ (KUB 23.72+ obv 42)

NB: from MH onwards, calque from **Luwian** (Yakubovic 2010)?

=za as a telic marker

<i>nu=za</i>	MUNUS.LUGAL	<i>katta</i>	<i>ešḥaḥat</i>
CONN=REFL	queen	down	sit.PST.3SG.MID

“And I, the queen, sat down.” (KUB 31.71 ii 2 NH/NS)

<i>nu=wa=ši</i>	<i>kāš</i>	LÚKARTAPPU
CONN=QUOT=3SG.DAT	DEM.NOM	charioteer

<i>pedi=ši</i>	<i>ešaru</i>
place.DAT=3SG.POSS.DAT	sit.IMP.3SG.MID

“Let this charioteer remain seated in his place.” (KUB 14.3 ii 72, NH/NS)

Other usages

‘Transitivity toggle’

- (33) a. *nu=kan* ^dUTU-*uš* *nepiša[(z* *katta* *šakuw)]ait*
CONN=PTC Sungod.NOM sky.ABL down look.PST.3SG
‘The Sungod looked down from heaven...’
- b. *nu=za* [^d*Ullikummin*]] *šakuiškizzi*
CONN=REFL Ullikummi.ACC see.PST.3SG
‘...and saw Ullikummi.’ (KUB 33.92 + rev. iii 18’–19’, NS)

Lexicalized usages:

- *=za iya-* ‘celebrate a festival’ vs. *iya-* ‘do’
- *=za kiš-* ‘become’ vs. *kiš-* ‘occur’

=za and unaccusativity

n=aš=zamunnaittat

CONN=3SG.NOM=REFL hide.PST.3SG.MID

‘(When Anu finished talking, he went up to the sky,) and hid himself.’ (KUB 33.120 i 38, MH/NS)

unut=wa=z

adorn:3SG.PRET.ACT=QUOT=REFL

‘He adorns himself.’ (KUB 31.143 obv. ii 23)

=za creates **unergative** verbs?

nu=za

6-ŠU

walḥanzi

CONN=REFL

six_times

hit.PRS.3PL

‘(Afterwards the two priests of the God Zilipuri come) they beat themselves six times.’
(KUB 1.14 ii 8)

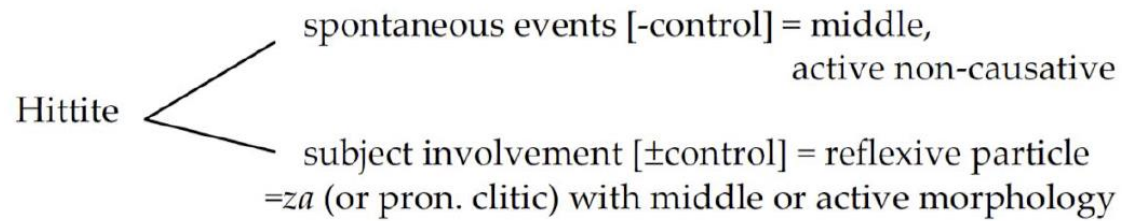
=za vs. the middle voice

The overlap starts by MH!

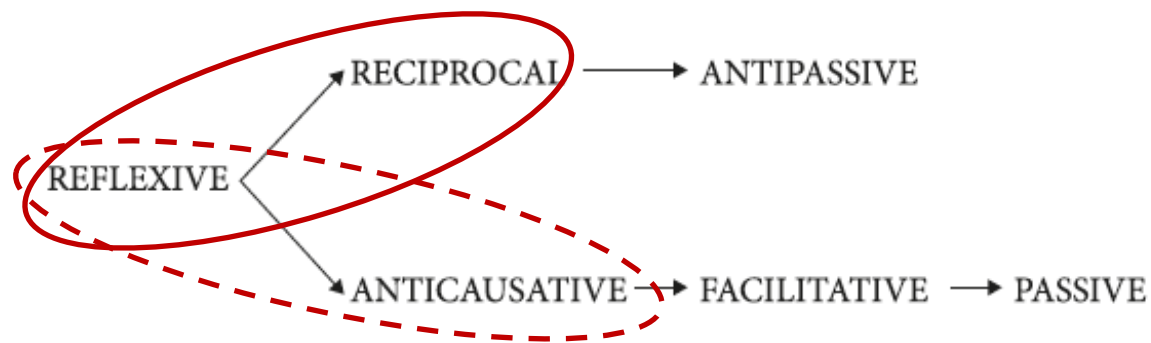


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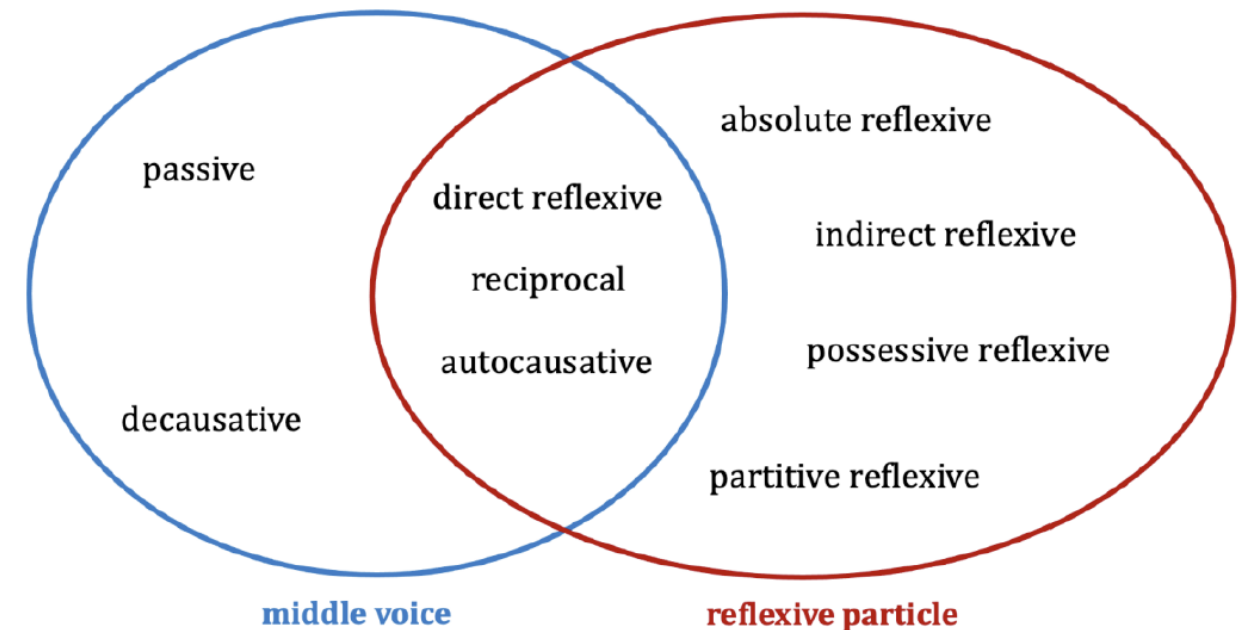
Original distribution



The functional development of =za follows known **grammaticalization** pathways of reflexives (Inglese 2023)



Polarization and partial convergence



see Sansò 2010

Reciprocal polyptotic constructions



“Reciprocal markers made up of the repetition of very same lexical item in different case forms.” (Kulikov 2014)

- *šia-...šia-* lit. ‘one...one’, *ka-...ka-* lit. ‘this...this’, *ara-...ara-* lit. ‘friend...friend’

a. *kuiš=at* *ŪL=ma* *paḥšari*
REL.NOM=3SG.ACC.N NEG=PTC protect.PRS.3SG.MID
“Who does not protect it [...].” (KBo 16.25 i 60)

b. **1-*aš*=wa** **1-*an*** *paḥšaru*
one.NOM=QUOT one.ACC protect.IMPV.3SG.MID
“Let them protect each other.” (Bronzetafel ii 34)

Polyptotic constructions

- a. [1-]aš 1-an kuwaškit
one.NOM one.ACC kill.IMPF-PST.3SG
“They killed each other continuously.” (KBo 2.5 iv 18)
MULTIPLE EVENT SITUATION
- b. nu 1-aš 1-edani šEŠ-tar ḥatreškizzi
CONN one.NOM one.DAT brotherhood(N).ACC write.IMPF-PRS.3SG
“They write ‘brotherhood’ to each other.” (KUB 23.102 i 12)
INDIRECT RECIPROCAL, NON-SIMULTANEOUS
- d. NINDA-an=man 1-aš 1-el e[zzatta]
bread.ACC=IRR one.NOM one.GEN eat.PST.3SG
“They would have eaten each other’s bread.” (KUB 23.103 rev. 5)
POSSESSIVE
- e. [nu=šša]n 1-EN 1-edan[i] šer tiyanzi
CONN=PTC one one.DAT above put.PRS.3PL
“And they place one on top of the other.” (KBo 29.94 iv 10)
CHAINING EVENT, ADVERBIAL

Polyptotic constructions

Bipartite quantifier NP strategy (Evans 2008: 46)

- They are markers of **grammatical** reciprocals (Nedjalkov 2007a: 10)
- Several **syntactic environments**: subject-oriented reciprocals, both direct and indirect , possessive (2c), and adverbial.
- **Binary** reciprocals (Maslova 2008: 230): they leave the valency of the base verb unaltered (as shown by e.g. number agreement with only the subject one).
- Different reciprocal **situations**: canonical, multi-participants, sequential, and chaining reciprocals.

The diachrony of polyptotic constructions

Conceptual schema underlying the development of polyptotic constructions (Heine & Miyashita 2008):

- REPETITION schema: the iteration of two identical NPs encodes reciprocity, es. Lat. *homo homini lupus* 'man is wolf to man'
- *šia-...šia-* 'one...one' and *ka-...ka-* 'this...this' = ONE-ANOTHER reciprocal schema
- *ara-...ara-* 'friend' = COMRADE schema

Stages of the **development** of polyptotic constructions:

(distributive >) underspecified anaphors > reciprocal interpretation under negation
> reciprocal interpretation in all contexts (cf. Bar-Asher Siegal 2014)

Distributive *šia-* 'one'

- a. *nu=ššan 1-ez KÙ.BABBAR KÙ.GI NA₄^{HI.A}=ya*
 CONN=PTC one.ABL silver gold stone(PL)=CONJ
hūmanduš dāi 1-edaz =ma=ššan šalwinan dāi
 all.ACC.PL put.PRS.3SG one.ABL=PTC=PTC dirt.ACC put.PRS.3SG
 “(The Old Woman takes a pair of scales). On one side she puts all silver, gold, and (precious) stones and she puts dirt on the other (side).”
 (KUB 30.15 + obv. 27–28)
- b. *ta EN ERÍN^{MEŠ} 1-an 1-an anda tarneškizzi*
 CONN lord troop(PL) one.ACC one.ACC in let.IMPF-PRS.3SG
 “He admits the military commanders one by one.” (VAT 13 016 iv 10)

From repetition to contrast

Two symmetric events elicited as simultaneously co-occurring are easily understood as in **oppositive contrast** to each other (cf. Hopper & Traugott 1993: 84–86; Mauri 2008: 122)

kāšš=a GIŠŠUKUR ZAB[AR *ḥarzi*] *kāšš=a*
DEM.NOM=CONJ spear bronze hold.PRS.3SG DEM.NOM=CONJ
GIŠŠUKUR ZABAR [(*ḥarzi*)]
spear bronze hold.PRS.3SG

“(The two palace attendants are standing.) Both the one and the other hold a bronze spear.” (KBo 17.1 ii 21–22; transl. by Goedegebuure 2014: 331)

Underspecified anaphor

nu araš ari tezzi
CONN fellow.NOM fellow.DAT talk.PRS.3SG

“Then a colleague tells to a colleague.” (IBoT 1.36 i 43)

^{LŪ}*araš=ma=za aran kattan peškit*
fellow.NOM=PTC=REFL fellow.ACC down give.IMPF-PST.3SG

“And friend betrays his own fellow.” (KBo 2.5+ iv 16)

kāš=man kūn epzi [k]āš=a=man
DEM.NOM=IRR DEM.ACC take.PRS.3SG DEM.NOM=PTC=IRR

kūn epzi
DEM.ACC take.PRS.3SG

“If one would arrest the other and one the other.” (KBo 6.2 ii 56–57)

Negated underspecified anaphors

nu 1-aš 1-edani lē idalawēšzi

CONN one.NOM one.DAT NEG become.evil.PRS.3SG

“One shall not think of evil against the other.” (KBo 5.4 rev. 3)

nu LÚ^uar [aš] LÚ^uaran lē aušzi kāšš=a lē

CONN fellow.NOM fellow.ACC NEG see.PRS.3SG DEM.NOM=CONJ NEG

[kūn] išdammašzi

DEM.ACC hear.PRS.3SG

“One shall not see the other, and they shall not hear each other.”

(KBo 6.2 ii 56–57)

The grammaticalization of *ara-*

- **Semantic bleaching:** *ara-* 'friend' > 'each other'

nu araš aran a[r̥ha UL] tarnai
 CONN fellow.NOM fellow.ACC away NEG leave.PRS.3SG

“(As this onion is wrapped by its peel), and one (layer) does not release the other.”
 (KBo 21.41+ rev. 38)



Akkadian model?

aḥ-...aḥ- 'one...the other' < *aḥum* 'brother',
 (Bar-Asher Siegal 2014)

- **Univerbation** (e.g. Gr. ἀλλήλων)?

b. 2 LÚ.MEŠ ŠANGA GAL LÚ *araš* LÚ *aran* ZAG-a[n ŠU-an]
 2 priest(PL) big fellow.NOM fellow.ACC right.ACC hand.ACC
 KAxI=ŠUNU=ya *kuwaššanzi*
 mouth=3PL.POSS=CONJ kiss.PRS.3PL

“Two high priests kiss each other on the right hand and their mouth.”
 (KUB 20.88 i 1)

Summary: Hittite reciprocal constructions



Table 5. Hittite reciprocal constructions

	Type of marker	Polysemy	Type of reciprocal predicate	Type of event	Diathesis	Valency of the base verb
<i>Middle voice</i>	morphological	anticausative/ reciprocal	Lexical/ Grammatical	single	subject-oriented direct	decreased
<i>Particle =za</i>	clitic	reflexive/ reciprocal	Grammatical	single	subject-oriented direct/indirect	decreased
<i>Polyptotic constructions</i>	bipartite NP	distributive/ reciprocal	Grammatical	single/ multiple	subject-oriented direct/indirect, possessive, adverbial	unaltered

Table 13: Parameters of distribution of RCs in Homer.

Middle voice/Preverbs	<i>allélōn</i>
subject-/object-oriented lexical reciprocals spatial reciprocal, single-event situations	subject- (dir./indir.), object-, adverbial, possessive grammatical and lexical reciprocals proper and spatial reciprocals, all situation types

Summary: valency change

Table 16: Valency changing constructions

	Voice alternation	Reflexive particle <i>=za</i>	Periphrastic passive	Transitivizing suffixes	Polyptotic construction
(Anti)causative	+	+	-	+	-
Passive	+	-	+	-	-
Reflexive	+	+	-	-	-
Self-beneficiary	-	+	-	-	-
Reciprocal	+	+	-	-	+
PIE inheritance	+	-	(+)	+	-

Productivity



	Type frequency	Generality	Regularity
ANTICAUSATIVE			
Middle voice	-	-	-
Transitivizing suffixes	+	+	+
REFLEXIVE			
Middle voice	-	-	-
Particle =za	+	+	-
RECIPROCAL			
Middle voice	-	-	-
Particle =za	-	+	-
Polyptotic forms	+	+	+
PASSIVE			
Middle voice	-	-	-
Periphrastic passive	-	-	-

(based on Barðdal 2008)



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