

# The Anatolian *āmredita*: Distribution, Function, and Prehistory

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## §1 Anatolian Full Reduplication in Indo-European Perspective

[1.1] **Anatolian Full Reduplication (FR):** the continuous repetition of an entire prosodic word, including inflectional morphology (cf. Rubino 2005)

[1.2] **The Vedic *āmredita*:** a type of word-word compound formed of two fully-inflected, identical, adjacent lexical items consolidated under a single accent, e.g. Ved. *divé-dive* ‘day after day; every day’

[1.3] **āmredita in Vedic and Indo-European:** 291 tokens of 131 unique formations in the Rigveda identified by Klein (2003); this productivity far exceeds that of similar formations in other ancient Indo-European languages, where they generally constitute a very marginal category (e.g. Cyp. Gk. /āmati-āmati/, Cl. Arm. *awur awur* ‘day after day’).

[1.4] **An exception to this pattern? Anatolian:** Representative examples in (1) Hittite, (2) Hieroglyphic Luwian, and (3) Lycian:

- (1) *n=e=tta=kkan MU.KAM-ti MU.KAM-ti peran 3=ŠU [halziskan]du.*  
'Let them read them (*viz.* the tablets) aloud before you three times **year after year**.'

(KUB 21.1 + KUB 19.6+ iii 74)

- (2) *wa/i-na | (“ANNUS”)u-si-na | (“ANNUS”)u-si-na 1  
| (“BOS.ANIMAL”)wa/i-wa/i-ti-i 3 (“OVIS.ANIMAL”)ha-wa/i-ti  
| sa-sa<sub>5</sub>+ra/i-la-wa/i*  
'And I shall worship him **year after year** with 1 ox (and) 3 sheep.'

(Bulgarmaden §10-11)

- (3) *m=ede=te=wē: kumezidi: nuredi: nure-di: arā: kumehedi: ...* (= Gk. κατ' ἐκάστην ουμηνίαν)  
'And he shall sacrifice it **month after month** (as a) rite with a sacrificial sheep.'

(N320.26-29)

[1.5] **The Anatolian evidence:** a systematic collection has not been previously undertaken, though cf. Hoffner and Melchert (2008: 291, 320, *passim*), Dunkel (1981a,b), Dressler (1968), and Brosch (2008:18-19); the preliminary findings of such a study are presented here

[1.6] **Full Reduplication in Anatolian:** On the basis of this evidence, I will aim to:

- i. Outline the prototypical functional properties of FR in the Anatolian languages (§2)
- ii. Demonstrate that FR is *non-trivially* reconstructible for Proto-Anatolian (PA) (§3)
- iii. Establish the formal properties of FR in Proto-Anatolian and its subsequent development (§4)

## §2 The Function of Full Reduplication in Anatolian

[2.1] **Unlimited iteration:** FR expresses the unlimited repetition of an event or action, prototypically signaling its individuated quality; this sense driven by iconic semantics, i.e. formal iteration = semantic iteration, e.g. (4) Hittite and (5) Hieroglyphic Luwian:

- (4) GIM-*an=ma=za=kan ŠA DINGIR-LIM aššulan uškiškeuwan teħħun IŠTU DINGIR-LIM=mu parā parā SIG<sub>5</sub>-iškattari*  
 ‘When I began to observe the good will of the goddess, then—thanks to the goddess—(things) got **better and better** for me.’

(KBo 6.29 i 9-11)

- (5) *wa/i-tú-ta* (“\*163”) *mu-ha-na* (VITIS) *sa<sub>5</sub>+ra/i<-la>-ta-za-ha* PONERE-*ha ara/i-na ara/i-na*  
 ‘To it I offered MUHA and offerings **time after time**.’

(HAMA 4 §13; CHLI, ed. Hawkins)

[2.2] **Distributivity and universal quantification:** FR regularly forms distributive expressions ('each') distinguishing individuated members of a set; when referring to all members of a set, FR functions as a universal quantifier ('every'), hence the availability of the three semantically equivalent readings in (6) (= (1), above):

- (6) *n=e=tta=kkan MU.KAM-ti MU.KAM-ti peran 3=ŠU [halziskan]du.*  
 ‘Let them read them (*viz.* the tablets) aloud before you three times { year after year.  
each year.  
every year. }’

(KUB 21.1 + KUB 19.6+ iii 74)

The distinction between distributive and universal quantifier is clear in numeral FR, e.g. (7):

- (7) *nu 1-aš 1-aš INA É.DINGIR-LIM šarā šešuwanzı lē=pat karštari*  
 ‘Let **each one in turn** (lit. ‘one by one’) not neglect to spend the night up in the temple.’

(KUB 13.4 iii 56)

[2.3] **The ‘generalizing relative’ and indefinite formation:** FR of the relative/interrogative stem \**k<sup>w</sup>i-/k<sup>w</sup>o-* is a productive means to form the ‘generalizing relative’ ('who/whatever'; cf. Hoffner and Melchert (2008:151)), which introduces preposed relative clauses with the semantics of a universal quantifier (cf. Garrett 1994: 43-44), e.g. (8-10):

- (8) *nu URU.DIDL.HI.A kuiēš kuiēš [Š]A<sup>m.d</sup> SIN-<sup>d</sup>U*  
 ‘Whatever cities belong to Arma-tar̄hunta...’

(KUB 1.1 + 19.60 + iv 71; cf. Otten (1981:28))

- (9) *nu=kan ŠÀ KUR.KUR<sup>MEŠ</sup> URU Hatti LÚ.KÚR kuiš kuiš anda ēsta n=an=kan IŠTU KUR.KUR<sup>URU</sup> Hatti arha=pat uiyanun*  
 ‘Whatever enemy was within the lands of Hatti, I drove him out of the land of Hatti.’

(KBo 1.1 + i 71-72; Otten (cf. 1981: 8-9))

- (10) **RELi(a)-sa-pa-wa/i i(a)-ma REL-i(a)-sa** |CAPUT-ti-sa a-mi-i(a) DOMUS-ni-i(a)  
 REL+ra/i-i(a)-pa |URBS+MI-ni-i(a) tar/i-pa-a-ti  
 ‘Whateversoever person shall TARP on my house or city...’

(KARAHÖYÜK §22; *CHLI*, ed. Hawkins)

Significantly, a strong indefinite reading is often present, as in (9-10). This indefinite reading also likely available in (11):

- (11) *n=ašta LÚ.KÚR QATAMMA kuit KUR-e anda lammar lammar iattar[*i*]*  
 ‘Because the enemy may thus march into the land { at a moment’s notice... }  
 { at any moment... }’

(HKM 8 Ro 12-14 ; cf. Hoffner 2009:108ff.)

### §3 Full Reduplication in Proto-Anatolian

[3.1] **On reconstructing FR in PA:** On the strength of the examples in §2, it is clear that FR is a feature of PA. FR of temporal adverbial case-forms to form distributives/universal quantifiers ensured by agreement of three Anatolian languages in (1-3); similarly, FR to form ‘generalizing’ relative apparent in (8-10) (cf. also Pal. *kuiš kuiš*; CLuw. *kui kui* (KUB 35.133 ii 3))

#### [3.2] Two potential critiques:

- i. **Universality:** generally claimed that iconic word repetition—in particular, its use to form temporal adverbials and universal/indefinite pronominals (cf. Haspelmath 1997:179-82)—is a language universal (Stolz et al. 2011: *passim*); accordingly, the Anatolian evidence would point to a trivial feature of PA rather than FR as a grammatical process
- ii. **Productivity:** each function in §2 continues an inherited strategy, as evidenced by formal IE parallels and in some cases, even word equations (cf. Dunkel 1981a,b), as evident in (12); FR as a productive, synchronic process of word formation in Proto-Anatolian itself may therefore be challenged (cf. Rubino (2005:22); Stolz et al. (2011:105-9))

	<b>Iteration</b>	Hitt. <i>parā parā</i> ‘further and further’ = Ved. <i>prá-pra</i> ((e.g.) RV I.40.7c) = Gk. προπρο- ( <i>Od.</i> 17.25 προπροκυλινδόμενος)
(12)	<b>Temporal</b>	(e.g.) Hitt. UD-at UD-at ‘day after day’ cf. Cyp. Gk. /āmati-āmati/; Cl. Arm. <i>awur awur</i>
	<b>Relative</b>	Hitt. <i>kuiš kuiš</i> ‘whoever’, HLuw. /kuis kuis/, Pal. <i>kuiš kuiš</i> , etc. = Lat. <i>quisquis</i>

[3.3] **Productivity of FR in PA:** FR in fact shows limited, but demonstrable productivity in PA. With respect to the IE situation, PA has extended FR to a new semantic category, nominals denoting space/locality (generic or specific), e.g. (13) Hieroglyphic Luwian, (14) Lycian, and (15) Hittite:

- (13) *a-wa/i-mu* (DEUS)TONITRUS POCULUM.PES.\*67 **LOCUS-tá LOCUS-tá**  
 REL-*i(a)-mi-sa* \*135(9)-*ti sa-tá*  
 ‘For me the Storm-God of the land of POCULUM was revered in every place  
 with ... (?)’

(KARAHÖYÜK §12; *CHLI*, ed. Hawkins)

- (14) *pddēne=ke: xbānije: izredi*  
*ehbijedi: hātahe: tlāñ nele: nele: tarbi-*  
*de: ...*  
 ‘And in the locales of Kyaneai with his hands  
 in plaza after plaza he *t-ed* Tlos ... (?) ...’

(TL 44a 46-47)

- (15) *U LÚ AGRIG.TU[R? UR]UNerikk[a-( ) KISLAH-az KISLAH-az 1 NINDA wageš[šar*  
 ‘And the petty administrator [ shall give ] 1 ‘breaking’-bread from every threshing-room  
 floor...’

(KBo 16.72+73 Ro ii? 4-5)

[3.4] **An innovation of PA:** Strong evidence for non-trivial productivity of FR in PA from innovative use in syntactic argument roles, e.g. (16) Hittite and (17-18) Hieroglyphic Luwian:

- (16) *nu ZAG.GAR.RA ZAG.GAR.RA sannapiliš DINGIR-LUM=za apadda sér*  
*TUKU.TU[KU-uwanz]a MUŠEN ḤURRI N[U.SIG<sub>5</sub>]*  
 ‘Altar after altar is empty. Is the god angry on that account? The *h*-bird is unfavorable.’

(KUB 5.7 Vo 16; cf. *CHD*, s.v. *sannapili-*)

- (17) *|(\*255)ka-la/i/u-na-<sup>wa/i?</sup> |(\*255)ka-la/i/u-na x-ta |(^MANUS?)su-wa/i-ha*  
 ‘I filled granary after granary.’

(MARAŞ 8 §7; *CHLI*, ed. Hawkins)

- (18) *a-wa/i DEUS-ni DEUS-ni* REL-*ti-ha á-pi-si-na* “SOLIUM”-*sa-na i-zí-i-ha*  
 ‘And for every god whatsoever I made his own seat.’

(HAMA 4 §5; *CHLI*, ed. Hawkins)

[3.5] **The PA status of FR:** In view of the developments outlined in [3.3-3.4], non-trivial FR must be securely reconstructible for PA as a (peripheral) synchronic process functioning to express notions such as unlimited iteration, distributivity, universal quantification, and indefiniteness

- On FR as a ‘non-primary’ productive strategy, see Stolz et al. (2011: 549)

## §4 Formal Properties of Full Reduplication in PA (and beyond)

[4.1] **Wordhood:** In contrast to the Vedic *āmredita*, an overwhelming body of evidence points to the PA treatment of FR as two independent prosodic words; two applicable diagnostics:

- i. **Word divider:** In Hittite, FR is always written as two words with intervening space; in Hieroglyphic Luwian inscriptions which utilize the word-divider to mark the prosodic word, it consistently separates FR, e.g. (19) Hieroglyphic Luwian; with a single possible exception (TL 44b 51), the same holds for Lycian, e.g. (20):

- (19) *wa/i-na | (“ANNUS”) u-si-na | (“ANNUS”) u-si-na 1 (“BOS.ANIMAL”) wa/i-wa/i-ti-i 3 (“OVIS.ANIMAL”) ha-wa/i-ti | sa-sa<sub>5</sub>+ra/i-la-wa/i*  
 ‘And I shall worship him **year after year** with 1 ox (and) 3 sheep.’

(KULULU 1 §6; *CHLI*, ed. Hawkins)

- (20) *me kumezeiti nuredi: nuredi: a°[.....]*  
 ‘And they sacrifice **month after month...**

(TL 26 16)

- ii. **Independent accent:** Hittite plene writing in both elements of FR in (e.g.) (4)—repeated as (21), below—is strongly suggestive of retained independent accent:

- (21) *GIM-an=ma=za=kan ŠA DINGIR-LIM aššulan uškiškeuwan tehhun IŠTU DINGIR-LIM=mu parā parā SIG<sub>5</sub>-iškattari*  
 ‘When I began to observe the good will of the goddess, then—thanks to the goddess—(things) got **better and better** for me.’

(KBo 6.29 i 9-11)

[4.1.1] **A problem for FR?** This prosodic treatment does not rule out analysis as FR (cf. Stolz et al. 2011:102-5), which has typological parallels in Punjabi, Turkish, Thai, and elsewhere, e.g. (22):

		Simplex	FR
(22)	Punjabi	<i>nikkaa</i> ‘small’	<i>nikkaa nikkaa</i> ‘very small’
	Turkish	<i>büyük</i> ‘big’	<i>büyük büyük</i> ‘very big’
	Thai	<i>cháa</i> ‘slow’	<i>cháa-cháa</i> ‘really slow’

[4.2] **Iterativity and morphosyntax:** In Hittite, the concurrence of ‘marked imperfective’ stem (-*ske-*, -*šša-*, -*anna/i-*) with FR is ‘virtually obligatory’ (cf. Hoffner and Melchert 2008: 320), e.g. (23); that partial reduplication fulfills a similar iterative function in Hieroglyphic Luwian is suggested by the contrast between the reduplicated verb in (19) and (24) vs. simplex (25):

- (23) *apēdašš=a QATAMMA parā ēpzi nakkuwaš=at māhhan [udda]nī udda[n]ī parā appišket*  
 ‘She holds it out to them (viz. ‘the living’), just as **she held it out in each matter** of the *nakku(wa)-s.*’

(KUB 29.7 Ro 27-28)

- (24) *a-wa/i | TONITRUS-hu-na-(LITUUS)á-za-sa-za-’ DEUS-na-za | “OVIS” -ru-pi  
| sa<sub>5</sub>-sa<sub>5</sub>+ra/i-la-i | “ANNUS”-na ANNUS-na ||*  
‘He shall offer to Tarhunt’s gods *kurupi*-sheep year after year.’

(BULGARMADEN §10-11; *CHLI*, ed. Hawkins)

- (25) 1 (BOS.ANIMAL)*wa/i-wa/i-pa-wa/i-tu’ | sa<sub>5</sub>+ra/i-li-ha*  
And one ox to him **I offered.**

(MARAŞ 3 §5; *CHLI*, ed. Hawkins)

[4.2.1] **Morphosyntactic implications for PA:** Hieroglyphic Luwian evidence supports a strong tendency in PA for FR to trigger iterative verbal marking, which Hittite has grammaticalized as a rule; the emergence of this relationship is very likely an innovation of PA

- The development of this morphosyntactic process may be understood as a uniquely Anatolian strategy to effect ‘semantic reinforcement’, typologically parallel to Vedic (cf. Klein 2003:776-77, 788), e.g. RV I.12.2: *agním-agním hávīmabhiḥ / sádā havanta viśpátim* ‘Agni over and over with their invocations / do they invoke constantly, the master of the clan’, where both adverb and lexical repetition (*hav... hav-*) underscore the unlimited character of the repetition instantiated by the *āmredita*.

## §5 Summary

[5.1] **Functional properties of FR in (Proto-)Anatolian:** The attested Anatolian languages productively employ FR to express notions such as unlimited iteration, distributivity, universal quantification, and indefiniteness (cf. §2); this synchronic productivity, including innovations such as extension to spatial nominals and use in syntactic argument roles, securely establishes its (non-trivial) PA status (cf. §3)

[5.2] **Formal Properties of FR in (Proto-)Anatolian:** All available wordhood diagnostics (orthography, accentual status) support the bipartite treatment of FR in (Proto-)Anatolian as two separate prosodic words; the emergent morphosyntactic relationship between full reduplication and iterative verbal marking is very likely an innovation of PA (cf. §4)

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