

## Morphophonemic variation in Luwian clitic chains and the origin of the particle [=r]

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**Abstract.** The Luwian language was spoken in Ancient Anatolia and is attested through written texts that are approximately datable to 1500–800 BCE. It belongs to the Anatolian sub-family of the Indo-European family and thus represents a close relative of Hittite. The Luwian language is attested in cuneiform and hieroglyphic scripts, but the present paper is based on the data in cuneiform transmission, which reflects better the Luwian phonological system. As typical of the Anatolian languages, Luwian features the second-position Wackernagel clitics, which are arranged vis-à-vis each other according to their formal ranks but can undergo morphophonemic changes in sandhi with each other. Establishing the correct inventory of the Luwian clitics is impossible without studying the licensing conditions and outcomes of such processes. The present paper approaches this problem from the perspective of morphophonemic variation in parallel versions of Luwian cuneiform incantations.

One of the outcomes of the conducted analysis is the demonstration that the cuneiform sequences *a-ta-tar* and *a-at-tar* can reflect the same clitic chain /a=ada=dar/ at the morphophonemic level. This alternation provides a new argument toward vindicating the existence of the fortis/lenis opposition in the Luwian phonological system, which is superimposed upon the inherited opposition between voiced and voiceless plosives. Another result of this paper is the observation that the particles [=dar] and [=r], previously regarded as independent lexical units, represent allomorphs of the same clitic. The occurrences of [=r] are limited to the position after the pronominal clitics /du/, /mu/, and /di/, while the variant [=dar] occurs after the pronominal clitics /as/, /an/, and /ada/. A formal account involving “weak” and “strong” clitics is put forward to capture this distribution, but its ultimate rationale must have to do with the laws governing syncope and lenition in Luwian. Quite aside from its linguistic conclusions, the present paper sheds light on a number of obscure and mostly fragmentary Luwian passages, which have defied satisfactory account thus far.

**Keywords:** Luwian Language, cuneiform, Wackernagel clitics, morphophonemics.

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## Варьирование морфофоном в лувийских цепочках клитик и происхождение частицы [=r]

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**Аннотация.** Ваккернагелевские клитики в лувийском языке подвержены морфонологическим изменениям в контакте друг с другом. Изучение условий и результатов сандхи внутри клитических комплексов представляется необходимой предпосылкой для установления полного инвентаря лувийских клитик. В настоящей статье эта проблема рассматривается через призму морфонологических чередований в параллельных версиях лувийских заклинаний в клинописной передаче. Одним из результатов проведенного анализа является тезис о том, что частицы [=daŕ] и [=r], ранее считавшиеся двумя различными лексическими единицами, в действительности представляют из себя алломорфы одной морфемы.

**Ключевые слова:** лувийский язык, клинопись, ваккернагелевские клитики, морфонология.

It is a well-known fact that several Anatolian Indo-European languages feature a system of Wackernagel clitics, whose place within a chain is normally not affected by discourse-driven permutations, being solely defined by their lexical properties. In Luwian, the clitics attached to the first tonic word within the clause are subdivided into six ranks, prescribing their position vis-à-vis each other. The first two slots within the maximum projection are occupied by the clause connectors

/=ha/, /=ba/ and the particles /=wa/, /=g(u)wa/.<sup>1</sup> Then follow the three slots for the dative, dative reflexive and nominative-accusative pronominal clitics, respectively. The final position within the chain is allotted to the so called “locative particles” /=tta/ and /=dar/ [Yakubovich 2015, § 7.1]. These chain-final clitics are usually left without translation. Their probable function, in the most general sense, is specifying the semantic roles of oblique arguments or adjuncts.<sup>2</sup>

Although transparent in theory, the organization of clitic chains in Luwian is obfuscated by morphophonemic changes (internal sandhi). One optional process concerns the clitic pronoun /=ada/ ‘it, they, them’ (Rank 5), which can lose its final vowel in front of the clitics /=tta/ and /=dar/ (Rank 6). This syncope can lead the complete disappearance of /=ada/ on the phonetic level and in graphic representation. For example, the morphophonemic sequence /a=(a)d(a)=tta/, where /a=/ is the sentence initial particle, can be recorded in cuneiform as either *a-ta-at-ta* [a=da=tta] or, with syncope, *a-at-ta*. The second sequence, phonetically [a=t-ta], would be indistinguishable from /a=tta/.<sup>3</sup> This means, in practice, that syntactic information may be necessary for determining the presence or absence of /=ada/ in the morphophonemic representation of *a-at-ta* or similar clitic chains. The interpretation of ambiguous clitic sequences

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<sup>1</sup> The particle /=wa/ is quotative in origin, but in some Luwian cuneiform texts its original meaning can no longer be observed, while in others this particle is altogether absent, even in quotations. For the problematic particle /=g(u)wa/, see now [Simon 2020b].

<sup>2</sup> The functional difference between the particles /=tta/ and /=dar/ lies beyond the scope of this paper, it is enough to state that they are not in free alternation in Luwian cuneiform texts, in other words, the use of one or another particle is predetermined for each particular construction. For further remarks of the function of /=dar/, see [Yakubovich 2010: 141–145] and [Giusfredi 2014: 308–311].

<sup>3</sup> Here and below the distinction is made between the phonological and phonetic transcription. The phonological transcription is used for the representation of stems and clitic combinations without sandhi effects. The phonetic transcription is used for word-forms in context and clitic combinations involving sandhi effects. The transcription of Luwian fortis and lenis stops follows the system outlined in [Yakubovich 2015].

resulting from syncope in Luwian cuneiform texts is addressed in some detail in [Rieken, Yakubovich, forthcoming].<sup>4</sup>

Additional types of alternations in Wackernagel clitic chains have come to light as a result of the edition of Luwian cuneiform texts within the framework of the *Luwili* project. It is a pleasure and privilege to address them in a volume dedicated to Academician Nikolaj Nikolajevich Kazansky, whose relentless efforts contributed to the revival of Indo-European Studies in Russia and had a positive impact on the careers of many younger specialists in the field. I hope that he will find the problems at the boundary between linguistics and philology treated here to be not unlike those that he tackles in Mycenaean Studies, the field that he has made his own.

A convenient starting point for the analysis of the new data is provided by the parallel incantations (1)–(4), cited below in narrow cuneiform transliteration, with the preservation of the original line divisions.<sup>5</sup> These passages have already been treated together in [Goedegebuure 2010: 305] and [Melchert 2016: 209–210], which led to incremental improvement in their understanding in both cases.<sup>6</sup> A substantial innovation by the present

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<sup>4</sup> The relevant rule was originally formulated with reference to the Luwian hieroglyphic texts in [Rieken 2008: 640–641]. I generally abstain from discussing hieroglyphic evidence in the present contribution, because the particle /-dar/ does not occur in this corpus. Note that Melchert's argument (*apud* [Giusfredi 2014: 31, fn 9]) for the occurrence of the particle [=r] in KARATEPE § 34 CAPUT-*ti-sa-wa/i+ra/i kwa/i-i-ta-na hwa/i-sà-i-ia* "VIA"-*wa/i-na* ("PES<sub>2</sub>")-*i-u-na* 'where a man fears to tread the way' (cf. [Hawkins 2000, 1: 53]) is not compelling. The element <ra/i>, which Melchert tentatively analyzed as [=r], can be alternatively taken as reflecting [=ri], the late form of the reflexive pronoun /-di/, which is used here to underscore that the verb *hwa/i-sà-i-ia* 'fears' denotes an uncontrolled state (cf. typologically German *sich fürchten* or Russian *бояться* 'id.').

<sup>5</sup> For the purpose of this paper (2) and (3) can be regarded as duplicates, although comprehensive analysis of the respective manuscripts reveals fine-grained differences between them. I cannot endorse the indirect join between that (3) and (4), which was tentatively proposed in [Goedegebuure 2010] et al.

<sup>6</sup> The important discovery by Goedegebuure was the identification of the preverb /zanta/ 'down', the cognate of Hittite *katta* 'id', which had previously been treated as a pronominal form. Melchert's contribution consisted in identifying the Luwian

analysis vis-à-vis the preceding treatments is the identification of liver and heart as targets of divine retribution. Besides the traces of ‘ŠÀ’ in KUB 32.8(+) iv 22’, this contention is supported by their immediate Hittite context. The ritual manipulations to accompany the incantations under scrutiny feature the presentation of sheep’s liver and heart on a loaf of bread. Furthermore, the *ikkunatt*-rite, to which these incantations belong, can now be interpreted on etymological grounds as “rite of treating with liver”.<sup>7</sup>

- (1) [ku-i]š-du-ur a<-ad>-du-wa-a[n-za a-an-ni-]’ti’-<<ya>> a-du-ut-ta  
[ta-]ni-mi-in-zi DINGIR.MEŠ-z[i<sup>UZU</sup> NÍG.GIG<sup>UZU</sup>]’ŠÀ’ šar-ra  
za-a-ti-i  
[pu]-’u’-wa-an-du a-ta-tar za[-an-da x-x] tar-ma-in-du  
URUDU-ya-ti  
[tar-]ma-ti  
‘[Wh]oever causes him evi[l], may [a]ll the gods [sn]atch up his  
[liver (and) he]art in this way. May they nail them do[wn]  
on top with a bronze [peg]!’; KUB 32.8(+) iv 21’–24’, CTH 759,  
cf. [Starke 1985: 120].
- (2) [ku-iš-tar SISKUR-an-za-an EN-ya]’a’-ad-du[-wa-a-a]l a-an-ni-ti  
a-tu-ut-ta D[INGIR.MEŠ-in-zi]  
[<sup>UZU</sup>NÍG.GIG<sup>UZU</sup> ŠÀ šar-ra za-a-ti-]’i’ pu-u-wa-a[n-du] a-at-tar  
za-an-ta  
[tar-ma-i-im-ma-an a-aš-du URUDU-]’ya’[-ti tar-ma-]ti  
‘[Whoever] causes e[vi]ls [to the patron of the rituals], [may] the  
g[ods] snatch [up] his liver [(and) heart in this way]. [May] they  
[be nailed] down on top with [a bron]ze [peg]!’; KUB 29.9 obv  
10’–12’, CTH 760, cf. [Starke 1985: 123].

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verb /pu(wa)-/ ‘to lift, elevate’, which in the present context can be translated with negative connotations as ‘to snatch’.

<sup>7</sup> [Sasseville 2020: 562–563] offers a convincing translation of Luw. /ikkuwar/ as ‘liver’, thus supplying the first Anatolian cognate of Gk. ἥπαρ, Ved. *yákr̥t* and Lat. *iecur* ‘liver’. The abstract noun /ikkunatt(a)-/ presumably represents a formal derivative of the verb /ikkuna-/ ‘to treat with liver’, itself a denominative based on \*/ikkun-/, the oblique stem of /ikkuwar/.

- (3) [ku]-<sup>ˈ</sup>i-<sup>ˈ</sup>iš-tar ma-a[-ha-aš-ša-aš-ša-an-za-an EN-ya a-ad-du-wa-a-al]  
[a]-an-ni-ti a=du[-ut-ta DINGIR.MEŠ-in-zi <sup>UZU</sup>NÍG.GIG <sup>UZU</sup>ŠÀ]  
[ša]r-ra za-a-ti-<sup>ˈ</sup>i [pu-u-wa-an-du a-at-tar za-an-ta]  
[tar-m]a-a-i-im-ma-an [a-aš-du URUDU-ya-ti tar-ma-ti]  
‘[Wh]oever [c]auses [evils to] the pa[tron of the rituals, may the  
gods snatch] up his [liver (and) heart in this way. May they be na-]  
iled [down on top with a bronze peg]!’; KUB 35.16(+) i 7”–10”,  
CTH 760, cf. [Starke 1985: 124].
- (4) [ku-iš-tar SISKUR-an-za-an EN-ya ad-du-wa-a-]al  
[a-an-ni-ti a-du-ut-ta ta-ni-mi-in-zi DINGIR.MEŠ-]in-zi  
[<sup>UZU</sup>NÍG.GIG <sup>UZU</sup>za-a-ar-za šar-ra za-a-ti-i] pu-wa-an-du  
[a-at-tar za-an-ta tar-ma-im-ma-an a-aš-du URUDU-]ya-ti  
[tar-ma-ti]  
‘[Whoever causes ev]il [to the patron of the rituals, may all the god]  
s snatch [up his liver (and) heart in this way. May they be nailed  
down on top] with [a bronze peg]!’; KUB 35.117 iv 1’–5’, CTH  
760, cf. [Starke 1985: 122].

The first alternation involving clitic chains in the parallel versions under discussion involves *a-ta-tar* in (5) vs. *a-at-tar* in (6), where (5) and (6) feature the transcription and morphological analysis of the matching last clauses of (1) and (2) respectively. Beyond a reasonable doubt, both sequences, *a-ta-tar* and *a-at-tar*, can be assigned the same morphological representation, which consists of the clause-initial particle /a=/, the pronominal clitic /=ada/ ‘they, them’ (Rank 5), and the “locative particle” /=dar/ (Rank 6). Although the two chains contain /=ada/ in two different functions, the direct object ‘them’ and subject ‘they’ respectively, both pronouns have the same reference, namely the liver and heart of the perpetrator. Furthermore, the clauses where they occur encode the same event, which requires the presence of /=ada/ in the clitic chain according to the rules of Luwian grammar.<sup>8</sup> In contrast, the sequence [a=dar] is

<sup>8</sup> The Watkins-Garrett rule prescribes the use of subject clitics, as opposed to the zero representation of the argument, in Anatolian intransitive clauses with the low

spelled *a-tar* in KUB 29.49 obv.<sup>9</sup> 6'. Thus, the comparison between (5) and (6) suggests that the syncope of /=ada/ (Rank 5) in front of the particle /=dar/ (Rank 6) does not trigger morphological ambiguity. In this respect, the outcome of the phonetic process under discussion is different from the syncope of /=ada/ in front of /=tta/, which may result in the disappearance of morphological information, as mentioned at the beginning of this paper.<sup>9</sup>

- (5) *a=da=dar*      *zanta* [...] *tarmaindu*  
 PTC=it.ACC=PTC    down      nail.3PL.IMPV  
 URUDU-*yadi*    *tarmadi*  
 of.bronze.INSTR    peg.INSTR

'May they nail them down on top with a bronze peg'; KUB 32.8(+) iv 21'-24' (restored after the parallel versions).

- (6) *a=t=tar*      *zanta*  
 PTC=it.NOM=PTC    down  
*tarmaimm-an*      *astu*  
 nail.PTCP-NOM.SG.N    be.3SG.IMPV  
 URUDU-*yadi*    *tarmadi*  
 of.bronze.INSTR    peg.INSTR

'May they be nailed down on top with a bronze peg'; KBo 29.9 obv. 11'-12' (restored after the parallel versions).

While the alternation addressed above is rather trivial, it has some theoretical interest as an argument for the presence of a fortis / lenis

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agentivity of the subjects. The general applicability of this rule to Luwian has been demonstrated in [Melchert 2011]. Likewise, it is normally assumed that the object clitics required by the verbal frame are overtly present in Luwian on the morphosyntactic level (i.e. before the phonetic spellout).

<sup>9</sup> An additional example that could illustrate the same phenomenon is KUB 35.101 obv. <sup>3</sup>*ha-ah-ha-pa-at-tar* if analyzed as [hahha=ba=(a)d(a)=dar]. Unfortunately, the sequence under discussion occurs in a fragmentary context and the meaning of *ha-ah-ha* is unclear. The analysis of the same sequence as the abstract noun in /=ttar/, offered in [Melchert 1993: 46], remains possible.

opposition in Luwian.<sup>10</sup> The sequence *a-ta-tar* is written in cuneiform without graphic replication of either of the dental stops, which is consistent with the transcription [a=da=dar].<sup>11</sup> The phonetically voiced character of the Luwian (and Hittite) stops written without graphic replication follows from their consistent rendering with voiced stops in the neighbouring Ancient Near Eastern languages (see lately [Simon 2020a: 245–246]).<sup>12</sup> If all the Luwian stops had the same length, the syncope between two identical consonants must have been followed by degemination, i.e. *\*a=(a)d(a)=dar > \*a=d=dar > \*\*[adar]*, and the contrast between *\*a=dar* and *\*a=(a)d(a)=dar* would have been lost, which, however did not happen. But if the stops written with graphic replication were normally phonetically longer, then one expects the preservation of a geminate after syncope, which indeed corresponds to the observed state of affairs.<sup>13</sup>

<sup>10</sup> The discussion of the contrastive laryngeal features characterizing Luwian plosives has intensified in recent years. While a number of representatives of the Leiden school emphasize the opposition fortis/lenis (see most recently [Vertegaal 2020]), the primary opposition voiceless-voiced is advocated in [Simon 2020a]. As must be clear from the discussion in this paragraph, I share a compromise position, according to which the voice and length features reinforced each other in ensuring phonetic contrast between the intervocalic pairs of Luwian stops, i.e. [-b-]/[-pp-], [-d-]/[-tt-], [-g-/-kk-].

<sup>11</sup> Cf. also the additional instances of /=dar/ written without graphic replication after vowels: KUB 9.31 ii 25 *pa-a-tar*, KUB 29.31 iv 6' *a-wa-tar*, KUB 35.43+ ii 36 *ma-am[-m]a-na-tar*.

<sup>12</sup> This observation provides a straightforward phonetic argument against the contention in [Katz 2007] that the Homeric clitic *ταρ* is borrowed from the Luwian clitic /=dar/. For a recent objection against the same hypothesis coming from a Hellenist, cf. [Jiménez Delgado 2017: 542, fn. 28].

<sup>13</sup> Note, however, that in other cases the optional vowel syncope between two identical lenis stops may yield a lenis stop in Luwian. The case in point is provided by the instrumental forms in stereotypical blessing formulae, e.g. KUB 35.43+ ii 38 *an-na-ru-um-ma-hi-ta-ti*, KBo 29.6 i 4' [*a-an-na-r*]u-um-ma-hi-ta-ti vs. KBo 29.3+ ii 8 *a-an-na-ru-um-ma-hi-ti*, KUB 35.16 i 11' [*an-na-r*]u-um-ma-hi-ti or KUB 35.43+ ii 38 [*h*]u-u-i-du-wa-la-a-hi-ta-ti vs. KBo 32.8(+) iv 14', KBo 29.31 iv 8' *hu-it-wa-la-hi-ti*, KBo 29.3+ ii 8 *hu-i-it-wa-la-hi-''ti*'. A likely factor that contributed to the secondary lenition of the new stops in this case was analogy with the other instrumental endings, which invariably end in /-di/ in Luwian.



Now, in addition to this syncope, the examples (1)–(4) feature one more instance of a suggestive morphophonemic change involving clitics. The dependent clause ‘whoever causes evil to the patron of the rituals’ at the beginning of (3) contrasts with a shorter variant ‘whoever causes him evil’ at the beginning of (1).<sup>14</sup> Below, these two clauses are transcribed and annotated as (7) and (8) respectively. There is no doubt that the referent of the clitic pronoun /=du/ ‘to him’ in (8) is the patron of the rituals, in other words, the two clauses are pragmatically equivalent. Nevertheless, they feature one more difference, which up to now has been considered lexical: the particle [=dar] in (7) contrasts with the particle [=r] in (8).<sup>15</sup>

- (7) *kwis=dar malhassassanz-an*  
 who.NOM.SG=PTC ritual.POSS.PL-DAT.SG

*niya attuwāl annīdi*  
 lord.DAT.SG evil.ACC.PL cause.3SG.PRS

‘Whoever causes evils to the patron of the rituals’; KUB 35.16(+) i 7’–8’ (restored after the parallel versions).

- (8) *kwis=du=r attuwanza annīdi*  
 who.NOM.SG=he.DAT=PTC evil.ACC.SG cause.3SG.PRS

‘Whoever causes him evil’; KBo 29.9 iv 21’ (restored after the parallel versions).

<sup>14</sup> The clause ‘whoever causes evil to the patron of the rituals’ belongs to the stock of standard formulae used in Luwian incantations. It is best preserved in KUB 9.6 iii 25’–26’ [Starke 1985: 115], for the most detailed treatment of this passage available thus far, see [Garrett, Kurke 1994]. In contrast, the shorter variant of this clause is unique to our corpus.

<sup>15</sup> An additional difference between (7) and (8) does not affect the substance of this paper. The form *a<-ad>-du-wa-a[n-za]* = [attuwanza] in (8), if correctly restored, represents a dialectal accusative singular form [Yakubovich 2013/2014: 285–286], which corresponds to the accusative plural form [attuwāl] in (7). The meanings of the two forms are obviously similar in context. Note that the spelling [*a-an-ni-’ti’-<<ya>> a-du-ut-ta*] in (1) must reflect a false sandhi between [annīdi] and [a=du=tta] at the beginning of the following clause, which could be introduced in the process of dictation.

One thing that is clear about the particle [=r] is that it always occurs at the end of the clitic chain, and thus can be provisionally assigned Rank 6. Otherwise it represents “a very unclear enclitic element” [Melchert 1993: 182]. Unlike the Luwian “locative particles” /=tta/ and /=dar/, which find formal cognates =*te* and =*de* in the related Lycian language [Melchert 2004: 8, 61], [=r] lacks obvious counterparts elsewhere in Anatolian. One should, however, take notice of an earlier attempt to link the particles [=r] and /=dar/: according to [Giusfredi 2014: 313–314], /=dar/ can be analyzed as the historical combination of the “locative particles” /=tta/ and /=r/. In order to account for the discrepancy between the fortis stop in /=tta/ and its lenis counterpart in /=dar/, Giusfredi tentatively proposed the lenition of /=tta=/ when it is driven outside the final position in the clitic chain. Unfortunately, Giusfredi’s account does not have the explanatory status with regard to the origin of [=r]. If one follows it, one is forced to assume the existence of a separate Rank 7, for which the Luwian clitic chains do not otherwise supply material evidence, for the sake of this obscure particle.

A more straightforward approach, in my opinion, is to assume the allomorph [=r] in (8) represents a shorter variant of /=dar/ in (7), conditioned by the presence of the preceding particle /=du/ ‘to him’ (Rank 3). As the initial fast check of this hypothesis, it is possible to go through the other occurrences of [=r] looking for distributional coherence. The results are promising: KUB 35.133 iii 1 *a-ú-i-dur* / [awi=du=r],<sup>16</sup> KBo 35.48 rev. 10' *[zi-la-d]u-úr* / [zila=du=r], KUB 35.102 i 6' *a-ti-ir* / [a=di=r], KUB 35.125 r. col. 6', 7' *a-du-úr* / [a=du=r], KUB 35.125 r. col. 8' *[a-du-úr* / [a=du=r], KUB 35.98 obv. 8 (-) *x-ta-du-úr*, KUB 25.39 iv 7 *šu-um-ma-al-la-an-na-mu-ur* / [summallanna=mu=r], KBo 29.28 obv. 6 *hu-pa-al-la-aš-ša-wa-ti-ir* / [huballassa=wa=di=r]. We can easily see that the final [=r] appears at the end of the clitic chain only after oblique

<sup>16</sup> Differently [Melchert 1993: 182]: [awidu=r], implying the form of 3 sg. impv. rather than 2 sg. impv. of /awi-/ ‘to come’. Note, however 2 sg. impv. *a-ni-ya* in KUB 35.133 iii 4 and 2 sg. impv. *pí-i-ya* in KUB 35.133 iii 14, whereas 3 sg. impv. *a-wi<sub>5</sub>-du* appears first in KUB 35.133 iii 16.

pronominal clitics, namely [=du] ‘to him’ (Rank 3), [=mu] ‘to me’ (Rank 3), and [=di] ‘to himself’ (Rank 4).<sup>17</sup>

No less instructive are the results of the reverse test for the presence of the full particle [=dar] after the same pronominal clitics /=du/, /=mu/, and /=di/. The only potential example of this kind is the fragmentary sequence KUB 25.38 obv. 8’ (-)x-ta-du-tar = [-ta(=)du=dar] (cf. [Melchert 1993: 210]), but in this case (-)x-tadu may alternatively be analyzed as an imperative verbal form. The opposite distribution characterizes the position after the Rank 5 pronominal clitics /=as/, /=an/, and /=ada/, which mark subjects or direct objects: here we have about 10 occurrences of [=dar], again according to data presented in [Melchert 1993: 210], but no instances of [=r]. Thus, the data at our disposal suggest a (near-)complementary distribution between the segments [=dar] and [=r], which facilitates in turn their treatment as allomorphs.

Naturally, the assumption that [=dar] and [=r] are variants of the same morpheme depends on whether they can be treated as synonyms. Here I must admit that the evidence is limited and its best part has already been presented above. The contrastive examples (7) and (8) represent the only case where the two assumed allomorphs occupy the same slot in the same construction, and therefore their semantic identity emerges as the straightforward combinatorial solution. The second best example is the contrastive pair (9)–(10), where [=dar] and [=r] occur in ditransitive constructions, which both involve verbs with the meaning ‘to tie, bind’.<sup>18</sup> Example (10) features [=dar] directly attached to a nominal form, while in (10) the oblique clitic [=du] marking a raised possessor is found in front of the variant [=r]. Both “locative particles” are presumably head-marking the oblique arguments, namely the items something else is attached to. The relevant noun (‘body’) is overtly expressed in (10), while in (9) it

<sup>17</sup> Formally, the clitic /=mu/ can also mark the direct object ‘me’, but /hwiya-/ ‘to run’, which functions as the predicate in the relevant sentence, is normally not combined with indirect objects. Cf. the discussion of KUB 25.39 iv 7–8 later in this paper.

<sup>18</sup> The verb /hab(a)i-/ ‘to bind’ is not restored in [Starke 1985] but listed in [Melchert 1993: 55] in connection with the contexts mentioned in (10). For details see [Melchert 1988: 238–240].

is presumably co-referential to the blooded clothes mentioned in the preceding clause. Although the association of the verbs /hishiya-/ ‘to tie’ and /hab(a)i-/ ‘to bind’ with two different “locative particles” cannot technically be ruled out, the hypothesis that we are dealing here with allomorphs of the same particle obviously simplifies the account.

- (9) *Annaruminzi*                      *ashanuwanta*  
 Annarumi-gods.NOM.PL    blooded.ACC.PL.N  
*kwinzi*                      *wassantari*  
 REL.NOM.PL.C    wear.3PL.PRS.MED  
*lulahinz=dar*                      *huppara(n)z*  
 of.Lulahhi.ACC.SG=PTC    sash.ACC.PL  
*kwinzi*                      *hishiyanti*  
 REL.NOM.PL.C    tie.3PL.PRS

‘The Annarummi deities, who wear bloodied (clothes), who tie on top the sashes of the *lulahhi*-barbarians’; KUB 9.31ii 22–24, CTH 757, cf. [Starke 1985: 53].

- (10) [*zil*]a=du=r                      *massaninzi*    *zamman*  
 then=he.DAT=PTC    god.NOM.PL    destruction.ACC.SG  
*tabaru*                      [*ta*]daryamma    *hīrun*  
 t.ACC.SG    curse.ACC.SG    perjury.ACC.SG  
*wassini*                      *nis*                      *ha[ba(inti)]*  
 body.DAT.SG    PROHIB    bind.3PL.IMPV

‘Then may the gods not bind to his body *destruction, judgment, curse, and perjury*’; KUB 35.48 rev. 10’–11’ (restored after KBo 29.3+ iii 9’–10’), CTH 761, cf. [Starke 1985: 156].

In the instance of several other contexts featuring [=r], it is possible to claim that they are syntactically similar to those where one might expect /=dar/ despite the absence of direct parallels. For example, although the line from the Istanuwa Songs KUB 25.39 iv 7–8 *šu-um-ma-al-la-an-na-mu-ur har-la-a pār-la-a hu-u-i-ya-ad-da* remains rather obscure, we can assume that it is a ditransitive clause. Its predicate is almost certainly /hwiya-/ ‘to run’, while its initial phonetic word *šu-um-ma-al-la-an-na-mu-ur* can be analyzed as the combination of the

neuter plural subject [summallanna], the oblique object [=mu] ‘me’ and the particle [=r] (thus also [Giusfredi 2014: 312]). The “locative particle” was arguably deployed here in order to specify the role of the indirect object (e.g. “ran against me” or “ran on top of me”?). This is perfectly compatible with the standard interpretation of /=dar/, summarized at the beginning of this paper.

The passage cited in (11) below causes difficulties due to the fragmentary state of its preservation but is reasonably clear from the lexical viewpoint. The first three lines can be partially and approximately restored as follows: ‘If a m[an *X-ed*, a god took] from him manhood, [*if these are his wives*,] he took [*from them*] womanhood’. The lines to follow likely refer to further atrocities inflicted upon the wives of the protagonist, which are mentioned both as direct objects ([wanattinz(a)], line 5) and indirect objects ([wanattiyanz(a)], line 6’). At the same time, we observe the contrast between the clause-initial complex [a=du] in line 5’ and [a=du=r] in line 6’, where [=du] is the raised possessor ‘his’. In line 5’, ‘wives’ (acc. pl.) must function as the direct object, while in line 6’ the same referent (dat. pl.) can only function as the indirect object. Presumably, the introduction of the clitic [=r] again specifies the indirect object’s semantic role (‘on his wives’ or ‘against his wives’?). The function of [=r] that emerges from this discussion is similar to the one proposed for the preceding example, and again fits in well with the status of [=dar] and [=r] as an allomorph of /=dar/.

- (11) 2’ *a-ú-wa ma-a-an* L[Ú-iš ...]                      If a m[an ...]  
 3’ *a-du-ut-ta zi-da-a-hi-š*[*a la-a-at-ta* ...] [took] his manhoo[d ...]  
 4’ *aš-ru-la-a-hi-ša la-a-at-ta* x[- ...]                      took womanhood [...]  
 5’ *a-a-du* MUNUS-*at-ti-in-za* x[- ...]                      [...] his wives [...]  
 6’ *a-du-úr* MUNUS-*at-ti-ya*[-*an-za* ...]                      on/against his wive[s ...]  
 7’ *a-du-úr* MUNUS-*at-t*[*i-ya-an-za* ...]                      on/against his wiv[es ...]  
 8’ [*a*]-*du-úr* MUNUS-*at*[-*ti-ya-an-za* ...]                      [o]n/[a]gainst his wiv[es ...]  
 KUB 35.125 r. col. 2’–8’, CTH 768<sup>2</sup>, cf. [Starke 1985: 252].

The other contexts featuring the clitic /=r/ are too fragmentary for a meaningful semantic discussion. The paucity of evidence is, of course, unfortunate, and the lack of fully preserved clauses featuring the sequence

/=di=r/ is particularly regrettable. If, however, we sum up the available facts, /=r/ in (8) clearly behaves as an allomorph of /=dar/, three more contexts support rather than contradict the functional identity the two clitics, and there are no data that offers evidence against it. Therefore, there are no reasons to treat the (near-)complementary distribution between /=dar/ and /=r/ as a coincidence.

The last challenge is to provide a phonetic interpretation for the proposed distribution of the two allomorphs. We have seen that /a=(a)d(a)=tta/ and /a=(a)d(a)=dar/ can develop into [atta] and [attar] respectively, but /a=du=dar/ yields [adur] as opposed to \*\*[attar]. Descriptively, we observe here the contrast between the shortening in penultimate vs. ultimate syllables of the clitic chain. From the cognitive perspective, there is some logic in the coexistence of the two patterns: if the penultimate syncope had been possible in any clitic chain, then /a=du=dar/, /a=di=dar/, and /a=(a)d(a)=dar/ would all have yielded \*\*[attar], and if the particle /dar/ could lose its vowel in any type of chain, then /a=(a)d(a)=dar/ would have yielded \*\*[adar], thus merging with the outcome of /a=dar/. We know, however, that linguistic changes do not always conspire to ensure preservation of grammatical contrasts: the optional merger of /a=ada=tta/ and /a=tta/ in Luwian is just one illustration of the opposite state of affairs. It is therefore appropriate to look for an account that derives the rules of syncope from the individual properties of the clitic morphemes involved.

In purely formal terms, I can propose a scenario, according to which the clitics of Ranks 3–6 can undergo syncope if they are marked in the lexicon as “weak”. The two clitics with such a marking were /=ada/ and /=dar/, while the remaining clitics were “strong”. In order for the syncope rule to be activated, a clitic of Rank 6 must have been added to the chain. Under default conditions, the syncope could only occur in the penultimate syllable (/a=(a)d(a)=tta/ → [atta], /a=(a)d(a)=dar/ → [attar]), but if this process were blocked by a “strong” clitic, then syncope of the final syllable could take place (e.g. /a=du=dar/ → [adur]). The proposed model would account for all the changes treated in this paper, but naturally leaves open the question of what makes individual clitics “weak” or “strong”.

In terms of phonological naturalness, I submit that /=ada/ was the best candidate for allegro reduction via syncope among the pronominal clitics.

First, the syncope would be blocked in those pronominal clitics that ended in a consonant, i.e. /as/ ‘(s)he’, /an/ ‘him, her’, and /mmas/ ‘them’, since their syncope in front of /tta/ or /dar/ would have yielded impermissible clusters of three consonants. Second, in the instance of the 2/3 sg. reflexive clitic /di/ it is possible to argue that at the moment when the syncope rule was first implemented, this morpheme, going back to Proto-Indo-European *\*toi*, was still pronounced as *\*dī̄*. The same, *mutatis mutandis*, is applicable to the 2/3 sg. reflexive clitic /mi/.<sup>19</sup> Third, the vocalism of the clitics 1 sg. /mu/ and 2/3 sg. /du/ was likely due to analogy with that of the free-standing pronominal forms *\*amū* ‘me’ and *\*tū* ‘thee’, cf. [Yakubovich 2010: 170]. It is probable that the synchronic connection between the stressed and clitic pronouns was still synchronically felt and prevented *-u* from syncope. This would leave /ada/ as the only pronominal clitic featuring a historical short vowel in the penultimate open syllable, which must have contributed to its “weakness”. But the main factor that facilitated the syncope in /a(a)d(a)=dar/ → [attar] and similar combinations was the placement of the penultimate vowel between two identical or similar consonants, as argued in more detail in Rieken and Yakubovich, forthcoming.<sup>20</sup>

The factors that conditioned the “weakness” of the chain-final particle /dar/, as opposed to /tta/ must have been different. Here the allegro reduction must have involved precocious lenition, i.e. *\*=dar* > *\*=rar* > [r].<sup>21</sup>

<sup>19</sup> For the origin of the Luwian reflexive clitics, see [Yakubovich 2010: 168–173]. For the hypothesis that the Proto-Indo-European diphthongs *\*ei* and *\*oi* can still be reflected as long vowels in Luwian cuneiform texts regardless of the accent, see [Rieken 2017: 28].

<sup>20</sup> For typological parallels involving syncope that is restricted to the position between identical consonants, see [Blevins 2004: 172]. A further factor that may have contributed to the syncope in this case was the perceived functional identity of the Luwian particle /ada/ and its Hittite equivalent /ad/, cf. [Yakubovich 2010: 64]. It is, however, doubtful that this factor played the decisive role, because the syncope in penultimate open syllable is also attested between the identical consonants in nominal forms (cf. fn. 13 above).

<sup>21</sup> For flapping *-d-* > *-r-*, a regular sound change postulated for Luwian in the first millennium BCE, see [Rieken, Yakubovich 2010: 216–217]. Note that if one accepts the traditional account of the same sound change as rhotacism *-d-* > *-r-* and extends it to the precocious development in the clitic under discussion, then the

Naturally, this process was precluded in those cases where the first consonant had already been reinforced through syncope in the allegro form, as in /a=(a)d(a)=dar/ → [attar]. Since [=r] remained fully unambiguous as the allomorph of /-dar/, there was no pressure to eliminate the allegro form, and it could be grammaticized or near-grammaticized in position after certain clitics. In contrast, since the syncope led to the loss of morphological information in the instance of /a=(a)d(a)=tta/ → [atta], the allegro form here remained a free variant up to the end of the written transmission of the Luwian language.

## Abbreviations

1, 2, 3 — 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> person; acc. — accusative; c. — common gender; dat. — dative; impv. — imperative; instr. — instrumental; med. — middle; n. — neuter gender; nom. — nominative; ptc. — particle; ptcp. — participle; pl. — plural; poss. — possessive; prohib. — prohibitive; prs. — present; rel. — relative; sg. — singular.

Gk. — Greek; Lat. — Latin; Luw. — Luwian; Ved. — Vedic.

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change *\*=dar* > *\*=rar* > *=r*, involving the syncope between two identical consonants, becomes even more straightforward.



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