The Anatolian Words for ‘earth’ and their Indo-European Origins

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*d^hégōm

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Chapter I

An “earthly” Problem

1. Introduction

The establishment of Anatolian as a separate branch of Indo-European, starting with the discovery and recognition of Hittite as an IE language by Hrozný (1915), has marked a new era in comparative Indo-European studies, and has led to many a fruitful debate, ranging from small issues, such as the identification of cognates, all the way to great matters, like the phylogenetic status of Anatolian within the Indo-European language-tree. It has very much been the case for the past few years, that the better we come to understand the Anatolian branch, the more we come to reconsider traditional views regarding the Proto-Indo-European mother-tongue. It is not my desire however to address such grand-scale hypotheses of language reconstruction. On the contrary, the main focus of the present study will be a slightly more "mundane" question; the word for 'earth' in Anatolian.

This, however, is far from an inconsequential topic, since it was the very introduction of the Hittite *tēkan* 'earth' into the discusion, that lead to our current understanding of IE thorn-clusters (dental stop + velar stop clusters) and the subsequent revolutionizing of the phonological shape of PIE **d^{h}ég^{h}ōm* -as opposed to older **ǵ^{h}d^{h}ōm* which had a velar + dental order more closely resembling Greek *χθών* and Sanskrit *kṣấs*. Ever since, more Anatolian languages have yielded cognates of PIE **d^{h}ég^{h}ōm*, most notably the Luwian languages with Cuneiform Luwian *tiia̯mmi-* and Hieroglyphic Luwian *takamī*. These, in turn have sparked new controversies over their phonological interpretation and ultimately their apophonic grade, a question that ties directly to the matter of the reconstruction of the original paradigm for PIE 'earth'.

NOMINATIVE	**d^{h}ég^{h}ōm*
ACCUSATIVE	**d^{h}ég^{h}omm*
GENITIVE	**d^{h}ǵ^{h}més*
DATIVE	**d^{h}ǵ^{h}méi̯*
LOCATIVE	**d^{h}ǵ^{h}ốm / *d^{h}ǵ^{h}émi*

Table 1. The declension of PIE **d^{h}ég^{h}ōm*

The Proto-Indo-European word for 'earth' is now commonly reconstructed as **d^{h}ég^{h}ōm* following an amphidynamic paradigm as seen in the table and for a long time it has been known to yield reflexes in all Indo-European branches (Gr. *χθών*, Skt. *kṣā́s*, Toch.A *tkaṃ*, Toch.B *keṃ*, Av. *zam-*, Lith. *žẽmė*, Alb. *dhe-*, Ir. *dú*, Lat. *humus*), including Anatolian (Hitt. *tēkan/takn-*, C.Luw. *tiia̯mm(i)-*, H.Luw. *takami*). (Mallory & Adams 2006: 120; Ringe 2006: 48; Schindler 1977: 31)

A closer look at the Anatolian evidence, however, raises significant problems for the Proto-Anatolian internal reconstruction, since the original ablaut in the Luwian forms remains hotly debated, and some Hittite data seem to point to a different phonetic shape of the root altogether. While at the same time, though they might arguably hide some remnant of the original word, not all not all languages in the Anatolian branch employ a reflex of *d^{h}égōm as their primary word for 'earth'; most notably Hieroglyphic Luwian with its mysterious $^{\text{TERRA}}$*taskwira/i-*. This situation complicates the matter even further, inviting an extensive, informed discussion of the Anatolian evidence and its consequences.

At this point, we should probably also address a key detail in the spelling that I have chosen to use for Proto-Indo-European reconstruction. The spelling **d^{h}égōm* with an unaspirated velar, already seen in the title of this thesis, must have probably struck one as a surprise, especially when I just introduced the PIE word above, as **d^{h}ég^{h}ōm*. Indeed the latter spelling, with two aspirated stops as reflected for instance by Greek *χθών*, is the traditionally reconstructed one, and the one most cited in the scholarly literature. However, Kloekhorst (2012b: 258-9), motivated by the unusually long vowel in Hittite *tēkan*, has presented a convincing argument for the reconstruction of a plene media velar **g* for the PIE form. The phonetic interpretation and etymological implications of this long */ē/* in the Hittite form, will soon be discussed in Chapter II, where I will examine and support the case for an originally unaspirated **g*. Naturally, the relationship between the accented vowel and the velar, and the choice of an unaspirated **g*, is consequential in the reconstruction of the ancestral PIE form, and will play a central part in my analysis of the Anatolian data. Thus, assuming that the PIE word was in fact **d^{h}égōm*, I will use this spelling throughout the rest of this thesis.

2. Research Question

Given this scholarly background, the primary aim of my thesis, is to investigate and etymologize the attested earth-words in the Anatolian branch of Indo-European. With the umbrella term "earth-words" herein, I am specifically referring to two distinct categories, both deserving of equal interest:

1) those words that are cognates of the reconstructed PIE **d^{h}égōm*, the primary Proto-Indo-European word for 'earth', regardless of whether they synchronically retain their original meaning (Hitt. *tēkan/takn- 'earth' vs* H.Luw. *takam- 'land, country'*); for convenience these will also be referred to as the "**d^{h}égōm* words" or the "**d^{h}égōm* family"

2) those words that cover the primary semantics of 'earth' in their respective language, but do not relate to the PIE **d^{h}ég^{h}ōm*, which in turn is assumed to have been displaced in these languages (H.Luwian $^{\text{TERRA}}$*taskwira/i-*).

The first half of my thesis will be an in-depth investigation of the first category. It will include a discussion of the phonetic interpretation of the relevant data, an exploration of the phonological and morphological prehistory of the synchronic forms and an evaluation of the reflexes of the original apophonic grades, before it concludes with an attempt at a reconstruction of the Proto-Anatolian and pre-Proto-Indo-European **d^{h}égōm* paradigm. The second half of my thesis will concern itself with those Anatolian 'earth'-words not related to I.E. **d^{h}égōm*. The approach here will be to first clarify their semantics - possibly against any surviving reflexes of **d^{h}égōm* in the same language - and then to explore their respective etymologies, accounting for the semantic-change. In this process, I will attempt to connect them to other words from the Anatolian branch that have comparable meanings but established etymologies, and thus propose a complete reconstruction of the 'earth'-related vocabulary of Proto-Anatolian.

The secondary purpose that this thesis wishes to serve, emerges as a result of the main goal. That is, to produce a composition solely dedicated to the treatment of the Anatolian earth-words (especially those of the **d^{h}égōm* family), since any such work does not exist in the scholarly literature, despite the plethora of information related the topic, that is otherwise only found in works concerned with larger subjects. In other words, beyond my own personal reconstructions

(which my reader may come to disagree with), an additional contribution of the present essay is to at least provide a clear and rounded view of the discussion revolving around the earth-words in the Anatolian branch of Indo-European.

Chapter II

The IE *d^hégōm word in Anatolian

1. Introduction

Naturally, our first step, will be to familiarize ourselves with the lexical data drawn from across the Anatolian branch. In this chapter, we shall take a closer look at all known terms, whose etymology has been traced back to Proto-Indo-European **d^{h}égōm*, including some much cited ones that have received wide acceptance, some whose relationship to the **d^{h}égōm* family has been both argued for and against, and others that have been cited before but have not yet received much attention. We will discuss their spelling, their phonological interpretation and the limitations of the scripts in which they are attested in, as well as their semantic interpretation in relation to the original meaning of the stem, *'earth'.*

2. The Hittite Evidence

2.1. Hittite *tēkan/takn-* and its paradigm

Of all the Anatolian languages, Hittite provides us with the richest source of evidence of the IE **d^{h}égōm* word, both in terms of number and of diversity of attested forms, allowing one to reconstruct almost the entire paradigm for Proto-Anatolian. The Hittite word for 'earth' is *tēkan* and its known case forms are listed in the table below and each individual case is subsequently treated separately:

NOMINATIVE-ACCUSATIVE	*tēkan*
GENITIVE	*taknāš*
DATIVE-LOCATIVE	*taknī*
LOCATIVE	*tagān*
ALLATIVE	*taknā*
ABLATIVE	*taknāz*

Table 2. The declension of Hittite *tēkan*

2.1.1. Nominative-Accusative

: *te-e-kán, te-e-ga-a(n)*

For the spelling of the nominative-accusative /e/ in Old Script Hittite, Kloekhorst (2014a: 231) records that the ratio of plene to non-plene spellings is an impressive 100%, meaning that this has to be phonologically interpreted as /tḗgan/ with a long accented /ḗ/ for the earliest Hittite stage. Etymologically, this form is compared to Sanskrit *kṣam*, Greek *χθών* and Tocharian *tkaṃ*, and can seemingly go back to one of original PIE direct cases; however, it is not fully clear which one. Yet another thing that remains unclear, is the mysterious gender-shift, that the word underwent as it was inherited into Hittite. This is the case, since original PIE masculine and feminine nouns are expected to regularly yield Hittite common gender, with distinct nominative and accusative cases. However, the PIE feminine **d^{h}éǵōm*, transforms into the Hittite neuter *tēkan*, with a single nom.-acc. case. This irregularity, is obviously tied to the origin of the form *tēkan* and the fate of the PIE direct cases, but again the exact relationship of the two changes is unclear.

As established in the introduction, it is clear that *tēkan-/takn-* belongs with all the other I.E. words for 'earth', the Proto-Indo-European paradigm for which was reconstructed by Schindler (1977: 31) as shown in the left half of the table below (the identity of the velar is not important for now). This amphidynamic declension clearly patterns together with the PIE word for *'hand' *ǵ^{h}ésōr* also reconstructed as amphidynamic by Riecken (1999: 280). Based on this account the Hittite nom.-acc. *tēkan* could perhaps be derived from either the PIE nominative or the accusative, through regular sound-change, likely leading to a merge of the two into a single form.

However, precisely due to this resemblance to the paradigm of *keššar 'hand'*, Kloekhorst (2008: 546, 992) reconstructs a different paradigm for **d^{h}éǵōm*, one in accordance with his own proposed PIE *keššar*-declension. This is shown in the right half of the table:

	Traditional Reconstruction		Kloekhorst (2008) Reconstruction	
	'earth'	***'hand'***	***'hand'***	***'earth'***
NOM	*$*d^hégʰōm$	*$*ǵʰésōr$	*$*ǵʰésr$	*$*d^hégm$
ACC	*$*d^hégʰomm$	*$*ǵʰésorm$	*$*ǵʰsérm$	*$*d^hǵémm$
GEN	*$*d^hǵʰmés$	*$*ǵʰsrés$	*$*ǵʰsrós$	*$*d^hǵmós$

Table 3. Two reconstructions of the earth-word

This complete reinterpretation of the traditional *$*d^hégʰōm$* paradigm is rather intriguing and not entirely unjustified. The reconstruction of an entirely new accent-ablaut pattern for the *'hand'* word is -in my opinion- truly necessary in order to account for the oddities in the paradigm of Hittite *keššar* (geminate *-šš-* in the direct cases *keššar, kiššeran* explainable only due to a consonant cluster; see Kloekhorst 2008: 546). Furthermore, formally speaking, the earth-word could definitely fit inside this new declension, as the new shapes of the oblique cases could still yield the attested Hittite forms; although with some complications. These become evident when we examine the necessary steps one must follow in order to evolve a pair *$*d^hégm$ ~ *$*d^hǵémm$* into the single Hittite nom.-acc. *tēkan*. They are summarised in Kloekhorst (2008: 992) as follows:

(1) At one point in early pre-Hittite, the form *$*d^hégm$* was mistakenly took for a neuter nominative-accusative, due to its lack of an endings *-*s* (the tell-tale sign of a common-gender noun).

(2) Subsequently its ending was swapped for *-*om* further reinforcing its reanalysis as a neuter noun *$*d^hégom$*.

(3) In the meanwhile, the old accusative *$*d^hǵémm$* had evolved into something like **$*d^hǵém$* becoming untransparent, and was thus removed from the paradigm in favour of the new nom.-acc. *$*d^hégom$*, which then regularly yielded *tēkan.*

Evidently, there is nothing problematic with this account, and it thus provides a satisfactory solution to the mysterious gender-shift of the PIE noun. However, it does seem to inflict a number of modifications onto the original direct-case-pair, to still end up with an immediate pre-Hittite form *$*d^hégōm$ > tēkan*, nearly identical to what Schindler had already reconstructed for PIE.

So, if we started from the traditional reconstruction instead, in order to turn the pair **d^{h}ég^{h}ōm ~ *d^{h}ég^{h}omm* into the single Hittite nom.-acc. *tēkan* we would only need to apply two regular sound laws:

1) reduction of word-final geminates

2) shortening of unaccented long vowels

The table below illustrates these two simple steps, that effortlessly cause a pair **d^{h}ég^{h}ōm ~ *d^{h}ég^{h}omm* to merge into what theoretically looks like an original neuter noun **d^{h}ég^{h}om.* Past, this point, a long series of other sound-laws will take effect, until they eventually produce the synchronic Hittite form.

		****-C:# > *-C#***	****V: > *V***	
NOMINATIVE	**d^{h}ég^{h}ōm*	> **d^{h}ég^{h}ōm*	> **d^{h}ég^{h}om*	> **d^{h}ég^{h}om*
ACCUSATIVE	**d^{h}ég^{h}omm*	> **d^{h}ég^{h}om*	> **d^{h}ég^{h}om*	

Table 4. Merge of the direct cases

If we now compare the two reconstructions, we realise that Kloekhorst's (2008) analysis predicts the exact same outcome (PIE feminine noun becomes neuter), but with a few additional steps and assumptions. For instance, there would be no need to swap an original ending **-m* with **-om* after the PIE nominative becomes misunderstood as a neuter, if we already had the ending **-om* in the PIE nominative in the first place. Consequently, the traditional reconstruction is more economical for the derivation of the Hittite nom.-acc..

Yet, these are far from the only treatments of Hittite *tēkan*. Steer (2013) has famously proposed a third interpretation of the origin of the Hittite nom.-acc., viewing the *-ē-* in *tēkan* as an anaptyctic vowel. He argues that the presence of the vowel in the Hittite form does not necessarily indicate an original full-grade in the PIE root **d^{h}ég^{h}-*, as assumed by both the traditional account and Kloekhorst's (2008: 992) revised paradigm. Instead, Steer (2013) reconstructs yet another paradigm, similar to Schindler's (1977: 31), but with an ablaut **d^{h}g^{h}ŏm* on the basis of Sanskrit *kṣam* and Greek *χθών*. From this nominative~ accusative pair, he also seeks to derive the Hittite form *tēkan*.

	Steer (2013) Reconstruction
NOM	*$*d^hǵ^hṓm$*
ACC	*$*d^hǵ^hómm$*

Table 5. A third reconstruction

In order to do so, the synchronically attested vowel *-ē-* is understood to have arisen in Proto-Anatolian originally as an anaptyctic vowel **ə*, which was inserted into the pre-Hittite form **dǵṓm > *dəǵṓm* in an effort to break up the initial consonant cluster. Subsequently, Steer (2013) assumes an accent shift **dəǵṓm > *də́ǵōm > *déǵōm*, that resulted into the change of the anaptyctic vowel into **é*. Finally, the long **ō* is shortened, resulting in pre-Hittite **déǵom*, and from that point onwards the evolution would be as expected.

This account, though comes with several significant drawbacks. At first glance, it suffers from the same issue as Kloekhorst's (2008) solution: new reconstructed paradigm, multiple steps and assumptions and only to reach the same final step **déǵom > tēkan*. Thus, it too does not compete with the simplicity of the original account. Steer's (2013) explanation though becomes even more problematic, after further inspection. Setting aside the unjustified accent-shift, which is there only to neutralise the problem created by the odd accentuation of the newly reconstructed PIE nominative *$*d^hǵ^hṓm$,* the biggest problem with Steer's (2013) analysis is the very interpretation of the synchronic vowel *-ē-* as anaptyctic. As established above, the consistent plene spelling of the *-e-* vowel in Hittite *te-e-kán, te-e-ga-an* points to a synchronic long vowel /é́/, which cannot possible be the result of an anaptyctic **ə*, not even due to an accent shift. Therefore, it is clear that Hittite *tēkan* requires at least a full-grade in the root, as in the traditional reconstruction; but even then we run into an entirely different problem.

2.1.2. A game-changing Observation

Indeed, in an amphikinetic paradigm, we do normally expect the presence of a short accented **é* in the root of the nominative and accusative singular. Yet, a short accented **é* in PIE yields a short accented /é/ in Hittite as well; and not the long /ḗ/ found in *tēkan* Kloekhorst (2008: 118), which is clearly expressed by the consistent plene spelling. Besides *tēkan*, there are but two more such exceptions in Hittite, where a PIE short accented **é* yields a Hittite long accented /ḗ/: *nēkumant- 'naked'* and *pēda- 'place'*. Faced with this situation Kloekhorst (2012b 2014a: 232-3) identifies a pattern, namely that in their PIE proto-forms, in both **nég^{w}mont-* and **pédo-*, the short accented **é* is followed by a plain voiced stop. On the contrary, in words like *nepiš 'heaven'* < **néb^{h}es* and *tepu-/ tepa̯u̯- 'small, little'* < **d^{h}éb^{h}-(e)u̯-*, which both contain a short accented /é/ in Hittite, the PIE short accented **é* is followed by an aspirated voiced stop.

Thus, Kloekhorst (2012b) sees the presence of a plain voiced stop, precisely, as the factor causing the unexpected lengthening of the short PIE **é* in Hittite. Subsequently, he compares this Hittite phenomenon of a lengthening of an original short vowel by a following plain voiced stop, to nearly identical cases in other Indo-European language; like Winter's Law in Balto-Slavic, where a plain voiced stop causes acute intonation and often subsequently lengthening of a preceding vowel and Lachmann's Law in Latin, where again lengthening of a preceding vowel is caused by a plain voiced stop.

The exact phonetic processes of these two phenomena though, are by themselves a matter of debate. Here, I shall adopt the same position as Kloekhorst (2012b: 258-9) and (Kortlandt 1988) in recognising that the discussed phenomenon (because it seems to be the same development taking place in three different IE languages independently) is most suitably explained, if we assume that the PIE plain mediae were in fact pre-glottalized stops. We would then explain the lengthening of the preceding vowel as an effect caused by the pre-glottal element of the following stop. As a result, Kloekhorst (2012b) assumes for Hittite, that at some pre-Hittite stage, the glottalic element of the pre-glottalized stop caused the lengthening of the preceding vowel *-V^{ˀ}G- > -V:G- yielding the three exceptional cases of long Hittite /ḗ/ from short PIE **é*.

This observation and parallel reasoning, ultimately leads Kloekhorst (2012b: 258-9 & 2014a: 232) to propose an alternative reconstruction for the PIE earth-word, not concerning its declension and ablaut pattern, but with regards to its phonetic shape. He thus argues for a reconstruction **d^{h}égōm* with an unaspirated velar instead of the traditionally reconstructed **d^{h}ég^{h}ōm* with an aspirated velar; or in the context of the Glottalic Theory, the PIE earth-word is reconstructed with a preglottalized velar /ˀg/. It is based on this highly compelling account that I support my choice, briefly expressed in Chapter I, to reconstruct PIE **d^{h}égōm* with a plain voiced velar and write it as such from the beginning of this thesis.

2.1.3. Genitive & Dative-Locative

: *ták-na-aš, ták-na-a-aš*

: *ták-ni-i*

The genitive form is attested once in the Old-Script texts, with a non-plene spelling of the word-final /a/; yet, multiple Middle-Script texts do illustrate plenty of plene spelled forms, which Kloekhorst (2014a: 316-7) interprets as indicative of the original nature of the vowel in the ending. The dative-locative form, on the other hand is entirely unattested in the old language. It is consistently found in the younger texts, though, spelled with a plene /i/ (Kloekhorst 2014a: 444), indicating that the final vowel must have been long and accented, just like that of the genitive.

These two forms must correspond to the respective oblique PIE cases. The Hittite genitive *taknāš* indeed derives regularly a reconstructed **d^{h}ǵmós* and therefore must underlyingly be /tknás/. Similarly, the Hittite dative-locative *taknī* must reflect the original PIE dative **d^{h}ǵméi̯* and so, it must underlyingly be /tknī/. Whether the PIE cluster **-éi̯* in a word-final position would regularly turn into Hittite long /ī/ is uncertain due to lack of relevant data; this scenario however, is accepted in Kloekhorst (2008: 993). The unexpected change of PIE word-medial *m in to Hittite /n/ is a development unique to this set of words and will be treated in a following chapter, when we attempt to reconstruct the original PA declension.

2.1.4. Allative & Ablative

: *ta-ak-na-a. ták-na-a, ta-a-ak-na-a*

: *ták-na-a-az, ták-na-az, ták-na-za*

The Hittite allative, in the older language, is regularly spelled with plene spelling of the final /a/, clearly pointing to a long vowel Kloekhorst (2014a: 273). The inconsistent spelling of the first /a/ could possibly lead to confusion; but we could simply assume as per Kloekhorst that it tries to denote a much later epentheic vowel, allowing us to interpret the oldest form of the word as /tknā́/. The ablative, on the other hand shows a variation comparable to that observed for the genitive as well (Kloekhorst 2014a: 444). It is safe therefore to assume that it would have a similar underlying form, /tknā́ts/.

With regards to their etymological source, they do not directly correspond to any case, found in the traditional PIE paradigm of **d^{h}égōm*. Nevertheless, if we were to simply transpose them onto a Proto-Indo-European shape, they would both go back to a form with zero-grade in the root and suffix and the accent at the final syllable, like **d^{h}ǵmó-*.

2.1.5. The spread of a nasal

It should be clarified, however, that for all of the above oblique cases that show /n/ in their word-initial clusters, that there is no direct development, that might shift PIE **m* to Hittite /n/. Such a change is only attested word-finally (Kloekhorst, 2008: 106) and thus only affects the nominative-accusative pair, and the locative, these three having an ablaut with the **m* in a final position, instead of in an initial cluster. This unexpected presence of /n/ in the oblique cases, is conveniently explained by Kloekhorst (2008: 993), where it is argued that the regularly inherited oblique cases like gen. **tkmós* or dat. **tkmí* would have contrasted with the direct cases is terms of their nasal. This, in turn, led to an analogical replacement of the expected *-m-* by a new *-n-* spreading from the direct cases and the locative (see below).

2.1.6. Locative

: *ta-ga-a-an* (OS), *ta-ga-an* (OS), *da-a-ga-an* (NH), *ta-a-ga-an* (NH), *da-a-ga-a-an* (NH)

The locative of *tēkan* is perhaps the most unclear of all its cases when it comes to its interpretation and perhaps the most consequential for my upcoming analysis. Regarding its spelling, Kloekhorst (2014a: 311) records that is occurs predominantly with a plene spelling of the second /a/, in both the old and younger language. This plene spelling then points to the existence of a long vowel /á́/and to a reading of the form as /t(ə)kán/, where the existence of the first vowel is uncertain. The etymology of this long /á́/ though, has presented multiple issues and has been met with various explanatory attempts.

Mirroring the Sanskrit locative *kṣámi 'earth'*, which unambiguously reflects **dʰǵémi*, with an e-grade in the suffix, it is sometimes assumed that the Hittite endingless locative *tagān* must also go back to a form with e-grade in the suffix. Hence Kimball (1999: 164) proposes that Hittite *tagān* is the direct outcome of a PIE form **dʰǵém*, assuming a change of **é* > /a/ a word-final nasal. However, this does not account for the long vowel in *tagān,* leading Melchert (1994: 135) to reject this proposal. He himself (1994: 135), rather follows Neu (1980: 8) interpreting *tagān* as a direct outcome of a PIE form **dʰǵóm*; this is attractive since PIE accented **ó* regularly yields Hittite long /á́/. Zeilfelder (2001: 52f.), on the other hand considers the possibility of a PIE form **dʰǵém*, with long **ē*; but based on all previous discussion, we would not expect long accented **ē* to have changed into anything else in Hittite.

An entirely different approach is followed by Schindler (1967: 202f) where he considers the first vowel of *tagān* to be both lingusitcally real. He considers it to be a result of analogy and assumes that the original ablaut of **dʰégʰōm/ dʰǵʰm-* > /tégan/ /tgn-/ was later changed to /tégan/ /tagn-/ after the productive e/a-ablaut in other nominal paradigms. This assumption, however, is uncalled for, since, the first vowel does not have a consistent spelling pattern, and if we were to consider it linguistically real, the best interpretation in my opinion would be a Late-Hittite anaptyctic /ə/ splitting the consonant cluster. Thus, in retrospect, the most appealing account is clearly that of a PIE locative *dʰǵóm,* or perhaps Kloekhorst's (2008: 993 & frth.) *dʰǵóm* with an accented monosyllable. This would

regularly yield a phonological shape /tkán/ in Older-Hittite, in agreement with the attested spellings, which could later evolve to /təkán/ in Later-Hitttie, justifying the occasional plene spelling of the first vowel.

2.2. The Goddess *tagānzepaš*

A seldomly cited word that perfectly fits the current discussion, is also the Hittite *tagānzepa-*. The oldest attestation of the word is spelled *ta-ga-a-an-zi-p°* with a plene <a> in the syllable *-gān-*, whereas in younger versions a spelling with *-ga-an-* is more common (Kloekhorst 2014a: 272); while additionally, there seems to be variation in the vowel spelled as either <e> or <i>. Taking the plene spelling into consideration, combined with Kloekhorst's (2012a, 2014b) interpretation of similar variant *-e/i-* spellings, I suggest may read Hittite tagānzepaš as [tkántsɨbas].

Semantically, it denotes 'earth' and evidently belongs in the **d^{h}égōm* family, together with *tēkan*. Of particular interest, thus, is the difference between the two earth-words when it comes to their syntactic function and distribution: while *tēkan* is a neuter, *tagānzepaš* is common gender and practically functions as an informal ergative for the inanimate *tēkan*, in other words as a subject in transitive clauses. On semantic grounds, however, they do not seem to differ, making the origins of the animate one even more intriguing.

Formally the compound *tagānzepa-* must be analyzed into a first element *tagān-* and a second element *-zepa-*. The first half, *tagān-*, is naturally to be equated with the endingless locative of *tēkan, tagān* 'on the earth', read above as /tkán/. The nature of the second half, though, is far murkier. According to Kloekhorst (2008: 938), we are dealing here with an element *-ze/ipa-, -še/ipa-* that seems to function as a suffix, deriving female deifications from a basis word. This element then could arguably contribute a meaning like 'spirit' or 'divine soul'; take for instance ^{d}*Išpanzašepa-* from *išpant-* 'night' or ^{d}*Ḫantašepaš*-from *hant-* 'forehead'. It thus effectively transforms the inanimate location tēkan into an animate *tagānzepaš*, a 'spirit on the earth'; in other words, an earth goddess. This reading, also complements the identification of the first half as the locative of *tēkan*, as we can understand this divine earth as literaly a spirit on the earth, or in the earth. Nevertheless, due to the absence of a separate lexeme *še/ipa-* and since its

meaning as derived from its compounds is still unclear, an attempt at etymologizing it would be too difficult.

3. The Luwian Evidence

3.1. Reading the Data

Before we proceed to the analysis, though, a word of caution is in order. When dealing with the phonological study of Luwian data the first and greatest problem one faces is the limitations of the syllabic scripts. Both the cuneiform script -to a lesser degree- and especially the native hieroglyphic script are unable to reflect any underlying consonant clusters that might have been present in the phonology of the Luwian languages.

Image 1. TERRA***takamī***

As a result, the challenges of the reconstruction, already begin from the interpretation of the phonetic shape of the Luwian data. Let us take an example, Hieroglyphic Luwian *ta-ka-mi-i*. This lexeme is a hapax legomenon only found once in the SULTANHAN inscription. We know its semantics are akin to 'earth' because of the logogram TERRA, and based on similarities in semantic and sound we can connect it to PIE **d^{h}ég^{h}ōm 'earth'*; however, its actual syllabic spelling reveals no information about its underlying phonetic interpretation. A spelling *ta-ka-mi-i* could arguably represent any of the following readings: [takámi], [tákkami], [takmí], [tkmí], [tkámi], all of them arguably derivable form some ablaut-grade of PIE **d^{h}égōm.* It is therefore nearly impossible to say with absolute certainty which reconstruction should be adopted. Consequently, for us here, it becomes difficult to determine the phonological environment that the velar is found in, and thus to understand the cause of its retention, or loss respectively. The same principle holds true for every one of the words treated below, and will thus still remain a relevant problem, even if a solution is reached. With that being said though, let us make an attempt at a phonetic interpretation and reconstruction of the data.

3.2. Cuneiform Luwian *tiiammi-*

Perhaps even more than the Hittite evidence, Cuneiform Luwian *tiiammi-* is the most often discussed member of the Anatolian earth-words. The first challenge is determining its underlying phonetic shape, allowing for two possibilities: either a trisyllabic [ti.jám.mi] or a disyllabic [tjám.mi]. First the trisyllabic view can be found in Čop (1970: 91) where a secondary accent-shift is argued, turning inherited Proto-Anatolian **d^{h}ég^{h}om-* into pre-PLuwian **d^{h}eg^{h}óm-* . From that point forward however, it is unclear how **d^{h}eg^{h}óm-* should yield *tiiammi-*, as the palatalization of the velar and the stem-final vowel *-i-* remain unaccounted for.

A trisyllabic form is also supported by Steer (2013: 65). who suggests a pre-form **d^{h}ég^{h}om-* assuming a development of the sequence **-ég^{h}o-* to /-iya-/ and an analogical gemination based on the locative form **d^{h}ǵ^{h}émi*. However, it remains fully unclear, why we should not assume the locative as the source in the first place. Additionally, such an approach creates various phonological problems, like the contradiction of the regular Luwian change **é* > /á/, or the application of Čop's Law, which would predict a geminated velar and an ungeminated nasal.

On the other hand, the disyllabic reading [tjám.mi] poses far less problems for the word's etymology, and it is most often assumed to be the accurate reading of the Luwian word, leading to the most detailed account yet, found in (Kimball 1994: 78 and Melchert 2003: 151):

1) The vowel *-a-* in front of the geminate *-mm-* must reflect a short accented **é*
2) This **é* would have triggered Čop's Law and geminated the nasal to *-mm-*
3) In the sequence **d^{h}ǵé-* the velar was palatalized before the front vowel, yielding a Luwian sequence /tjá-/

Therefore, combining the above information, and keeping the regular application of Čop's Law in mind, the only pre-form that can satisfy all of the criteria is the reconstructed **d^{h}ǵémi.* As the source of this ablaut grade, Kimball (1994: 78) takes the PIE endingless locative PIE **d^{h}ǵém*, leaving the stem-final *-i-* though is not explained. A far more convincing connection is offered by Kloekhorst (frth), who compares this form to the Sanskrit locative *kṣami*, the nearly direct outcome of a

PIE i-locative **d^{h}ǵémi*; precisely the pre-form assumed for Luwian, but a shape otherwise unparalleled in Anatolian. Nevertheless, from all the alternative accounts listed above, it becomes clear that any further discussion of the origins of this word demands further context: What is Čop's Law and why is it so important? Why is the velar, of all sounds, the most problematic for the etymology? What would an ablaut grade **d^{h}ǵém-* mean for Proto-Anatolian? This questions shall lead the discussion in Chapter III, where I will offer a detailed account of the phonological history of the controversial word.

3.3. Hieroglyphic Luwian TERRA*ta-ka-mi-i*

Hieroglyphic Luwian TERRA*ta-ka-mi-i* on the other hand, is a far more intriguing case. The word is a hapax legomenon, appearing only once throughout the Luwian corpus in the SULTANHAN inscription. It is accompanied and determined by the logogram TERRA, the same sign otherwise used for the representation or determination of Hieroglyphic Luwian *taskwa/ira/i- 'earth'.* This shred graphic feature is thus evidence of the semantic affinity between the two lexemes and can variably be read either as *'earth', 'land'* or *'place'*. Given the context a reading *'land'* is the most likely and it is my impression that a reading *'kingdom'* could also be justified, perhaps existing in a climactic pair with URBS *'city'*, moving from the lesser to the greater and more abstract, before returning back to the vine, which is the main concern in the text.

E 1. § 38 [*ni-pa-wa/i*]-*ta* |URBS+*MI-ni* |*hwi/a-sa-ha-a* |*ka-ti-i* |CRUS-*i*
2. § 39 |*ni-pa-wa/i-ta* |("TERRA")*ta-ka-mi-i* |*hwi/a-sa-ha* |*ka-ti-i* |*ta-i* ||
F 1. § 40 |*ni-pa-wa/i-ta* |*wa/i-na* |REL-*sa-ha* |*ka-ti-i* |CRUS-*i*

"or (if) anyone inclines to damage for the city, or (if) anyone inclines to damage for the land, or (if) anyone inclines to damage for the vine" (Hawkins 2024:263)

In contrast, the phonological interpretation of this hapax has seen considerable debate among scholars since Čop (1956: 44 & 1970: 91) and later Melchert (1994a: 253); Melchert (2003: 151) who support a reading /taggami/. This he claims to be the result of the preservation of the velar, due to the sound law of *-éC- > *-éCC-, which would have rendered the lenis velar into a fortis velar

/-gg-/. From that point forward, the list of interpretations goes on with Steer (2013: 67) reading /tagāmi/; Lipp 2009 I: I.297 and Oettinger 1976: 101 suggesting /dagmi/; Starke (1985: 253) suggesting /takm(i)-/ and Kloekhorst (2008: 861) arguing for /tgmī/ as the direct outcome of the PIE dative *d^h*ǵméi*.

If we view the syntactic position of this hapax next to the preceding and following clauses, we can deduce that its case is a dative singular. As a result, Kloekhorst (2008: 861) proposal is by far the most economic one, requiring the least remodeling of an original ablaut grade, in order to yield the presumed phonetic reading. This fact however, offers little proof in favor of this interpretation over others, as it does not deal with the evolution of the phonetic shape of the form; besides even if the case of the Luwian word is dative, this does not necessitate that it continues the ablaut grade of the PIE dative. The complex etymology of this word will be conclusively addressed in Chapter III, when we attempt to reconstruct the Proto-Anatolian paradigm; for now though, it suffices to establish the connection of *takamī* to the **d^hégʰōm* word regardless of specific ablaut.

3.4. The Deity DEUS*Takamana*

However, the story of Hieroglyphic Luwian does not end here, as we might be able to recognize one more cognate of the **d^hégōm* word: the significantly under-discussed Luwian deity *Takamana*. The name of the deity is attested in two similar fragmented inscriptions ANCOZ 10, §4 and ANCOZ 11, §5, in the dative case as *DEUStá-ka-ma-na-ia 'to Takamana'*. Naturally, a connection between the two Hieroglyphic Luwian words TERRA*takamī* and DEUS*Takamana* was immediately drawn by Poeto (2004), who additionally sought a promising parallel in the Cuneiform Luwian pair *immara/i- 'wild field'* and the deity DINGIR*Imarna-*, perhaps to be understood as a deity of the open fields and wilderness. I am further tempted to speculate that this Cuneiform Luwian deity DINGIR*Imarna-*, could be the same as the *i-mara/i* DEUSCERVUS$_3$ *'Stag-God of the field'* that we find alongside DEUS*Takamana* in the inscriptions ANCOZ 10, §6 and ANCOZ 11, §1, §7.

	NATURAL ELEMENT	DEITY
'earth'	TERRA*takamī*	DEUS*Takamana*
'field'	*immara/i-*	DINGIR*Imarna-*

Table 6. Element & Deity pairs

The similarity of the two lexical pairs of natural element~ deity, as shown in the table above, is indeed noteworthy, urging me to include the deity's name into the list of the Anatolian earth-words and thus consider it a descendant of PIE *d^h*égōm*. In contrast to *takamī*, though, this word reveals nothing of importance with regards to the ablaut grade of the root, and thus fails to contribute to the task of reconstructing the original paradigm of the Proto-Anatolian earth-word.

4. <u>The Lydian Moon-god *Τιάμου*</u>

Another, less often discussed word is the epithet *Τιάμου*, a modifier of the name of the Moon-god in a number of Greek inscriptions from Lydia dated to the 2nd–3rd century AD. (Pisaniello 2021) The first ever suggested correspondence between this word and the **d^h*égōm* family was made by Neumann (1961: 71-72) who utilized the semantics of another attested epithet of the Moon-god, *καταχθόνιος* 'subterranean' to draw connections with the Cuneiform Luwian word for 'earth' *tiia̯mmi-*. Furthermore, the hypothesis that the Moon-god *Τιάμου* was also the Moon-god *καταχθόνιος* 'earthly' may find further confirmation in the inscription SEG 57:1187, where he is paired with the Moon-god *Οὐράνιος* 'heavenly' (Pisaniello 2021: 126). Based on the above connection by Neumann then, two etymological possibilities are open: either the epithet *Τιάμου* is a native Lydian word, inherited directly from Proto-Anatolian, or it is a long-surviving Luwian word, that found its way into the local cult of the Moon-god.

If on the one hand, we assume that this epithet is somehow of Luwian origin, the word would fit with the broader analysis of Cuneiform Luwian *tiia̯mmi-* and it need not receive any further attention. If however, it does reflect a native Lydian form, it then becomes rather interesting, as it would be the sole attestation of the **d^h*égōm* word both within Lydian itself and also outside of the two primary branches of Anatolian, these being Hittite and Luwic. Let us then entertain the scenario where *Τιάμου* is indeed a Lydian word. How would that assumption

compare with our current understanding of Lydian historical phonology? Is a form Τιάμου derivable from PIE **d^{h}égōm* by regular application of sound-laws?

A preliminary issue that needs to be addressed is the phonetic interpretation of the initial sequence *Τιά-* which either represents a disyllabic with two full vowels [ti.(j)á-] or a monosyllabic [tjá-] featuring a palatal glide. The later seems more likely, if we wish to connect this to some apophonic grade of **d^{h}égōm* and it would coincidentally show the same development attested in Luwian. Thus given the shape of *Τιάμου* we would have expected it to derive through a hypothetical proto-form **t̯iám-* ultimately from **d^{h}ǵém-*.

The first challenge to this theory, is probably that fact that it assumes as a prerequisite, the shift of the voiced velar **ǵ^h into a palatal glide* -in a manner parallel to Luwian- a development which is otherwise completely unattested in Lydian. As for the vowels, though, there appears to be no particular concern; in this case Lydian /a/ can go back to either PIE **e* or **o* and the word-final *-ου* is merely a Greek genitive case-ending and not a reflection of an original sound. Furthermore, Lydian data is scarce, and perhaps such a consonantal development has not yet been recorded.

If that really is the case, then we might assume a development from PIE **d^{h}ǵém-* to pre-Lydian **t̯iám-*, similar to Luwian. Even so, the regular outcome of such a PIE cluster **t̯i-* would have been Lydian <*c*> (take for instance Lydian *ciw- 'god'* from PIE **d̯ieu̯- 'god'*), the value of which is even more disputed, (an affricate [dz] in (Melchert 1994a: 333), an affricate [tʃ] in (Yakubovich 2005: 77, note 11), a palatal stop [c] in (Kloekhorst 2023)). Consequently, Lydian *Τιάμου* cannot possibly reflect a word initial consonant cluster.

Perhaps then, we might revisit the reading [ti.(j)á-] which either include a hidden intervocalic palatal glide, not reflected in the Greek spelling, or entail a loss of the velar intervocalically. An even more serious problem arises then, involving the alleged absence of a synchronic palatal glide /j/ in Lydian, which we would have expected in any hypothetical preform of *Τιάμου*. Any Lydian word, where we would normally expect to find an inherited PA **j* based on etymological grounds, is transcribed with a sign <*d*>, generally believed to represent a dental fricative [ð] (Kloekhorst 2023, Melchert 1994a: 335). In other words a PA palatal glide **j* is inherited in Lydian as a dental fricative [ð]. Oreshko's (2019) proposed reading of

the sign <*d*> a the palatal glide [j] instead, enables the derivation of a Lydian palatal glide from PA **j*, and conveniently allows for a Lydian sequence [ti.(j)á-] with a PA intervocalic glide in a pre-form *tVjV́-. However, this proposal is founded on a set of dubious arguments and has found no further acceptance; we shall therefore keep to the traditional reading of Lydian <*d*> and the relevant sound law PA **j* > [ð]. Consequently, we would rather expect to find Lydian [tiðá-]; meaning that neither interpretation of *Τιάμου* [tjá-] nor [ti.(j)á-] is compatible with the phonological history of Lydian.

In other words, a natively Lydian word like *Τιάμου* is more than improbable; and even if we were to accept it into the Anatolian family of **d^{h}égōm* words, it would then have to originate from the Luwian branch and thus it would not offer any further insight into the shape of the original paradigm. As a result, we are left, with the Hittite and Luwian data alone, as source matterial for our reconstruction of the Proto-Anatolian earth-word.

Chapter III

Proto-Anatolian **tḗkʲam, *tkʲmā́s*

1. The Proto-Hittite Paradigm

Having gone through the first stage of our research, we will now proceed to the reconstruction of the Proto-Anatolian paradigm for the earth-word. We will begin by building our paradigm based on Hittite, as it contribute the vast majority of information in this discussion. More specifically, we will do so for a pre-stage of Hittite, where only regular phonological developments have taken place; we shall call this Proto-Hittite. This exercise allows us to say for instance, that Hittite *taknāš* comes from a hypothetical Proto-Hittite **tkmā́s*, since the synchronic word-medial /n/ is not the outcome of a regular sound-change, but the result of a spread of the nasal form the nom.-acc. PH **tḗkan*, and that in this pre-stage these oblique cases with medial **-m-* coexist right next to a direct case and a locative with final **-n*. The table below illustrates all three stages of the paradigm, collecting all reconstructions established on Chapter II.

	HITTITE	**PROTO-HITTITE**	**PIE**
NOMINATIVE	*tēkan*	**tḗkan*	**dʰégʷōm* */déˀgʲōm/
ACCUSATIVE			**dʰégʷomm* */déˀgʲomm/
GENITIVE	*taknāš*	**tkmā́s*	**dʰǵmés* */dˀgʲmós/
DATIVE-LOCATIVE	*taknī*	**tkmḗ*	**dʰǵméi̯* */dˀgʲméj/
LOCATIVE	*tagān*	**tkā́n*	**dʰǵóm* */dˀgʲóm /

Table 7. The Proto-Hittite paradigm

Note, that for the Proto-Indo-European stage, I have depicted the forms in two different ways. In italics, I have presented the forms in the traditional IE notation, which distinguished between mediae aspiratae like **dʰ* and plain mediae like **ǵ*. Next to each word, I have also provided a spelling following a phonological notation more faithful to the principles of the Glottalic Theory, distinguishing between plene mediae like **d* and glottalic mediae like **ˀgʲ* This second spelling is more in line with the phonetic shape of the stops that is assumed for the above interpretation.

2. A Proto-Luwian Form

Subsequently, we will turn to the Luwian forms, try to uncover their own Proto-Anatolian preforms, and figure a way to reconcile them with and incorporate them into the above Hittite-based reconstruction. However, in order to have a meaningful analysis of the Luwian evidence, we will have to first introduce two additional sub-topics into discussion. The first one will be the infamous Čop's Law and the theory of Luwian consonant gradation, perhaps the most consequential phonological phenomenon in the history of Luwian. The second one will be a brief detour into the development of IE mediae velars in Luwian, as our understanding of their behavior directly determines our interpretation of the relevant data.

2.1. PIE Apophony & Luwian Consonant Gradation

In 1970, Čop brought attention to the regular correspondence between the Cuneiform Luwian sequence -aCCV- and the Hittite -eCV- both derived from a PIE sequence **-éCV-*, some are listed in the table below. In the later literature, these examples are explained by assuming a gemination sound law where PIE **-éCV-* yields Luwian -aCCV- commonly referred to as Čop's Law. Melchert (1994b: 305) even considers the change of the vowel and the gemination of the following consonant to be "inextricably bound together".

LUWIAN	HITTITE	PIE
-aCV-	**-eCV-**	****-éCV-***
parran 'before'	*peran 'before'*	**pérom*
tappaš 'sky'	*nepiš 'sky'*	**néb^{h}es*
mallit 'honey	*militt 'honey'*	**mélit*

Table 8a. Čop's Law

0Another important parameter for Čop's Law is presented by (Kloekhorst 2006) who notes that a short accented **ó* does not cause gemination of a following consonant, but on the contrary, it causes lenition of a following consonant. This holds true for both Hittite and Luwian, thus indicating that this lenition must have been Proto-Anatolian phenomenon.

LUWIAN	HITTITE	PIE
tāu̯a/i- 'eye'	*šākuu̯a 'eye'*	**sók^{w}o*

Table 8b. Čop's Law

Kloekhorst (2006) reasons, that the most economical way to explain this situation is to assume that PIE short accented **ó* had already undergone lengthening in Proto-Anatolian long **ṓ*, and thus did not participate in Čop's Law. It thus becomes plainly clear why Luwian *tiu̯ammi-* requires a PIE pre-form like **d^{h}ǵémi* with the sequence **-ém-*, as this is the only combination that would result in the attested, geminated, Luwian nasal *-amm-*.

2.2. The Mystery of Luwian Velars

Moreover, while attempting to determining the underlying phonological shape of the two relevant Luwian words, it became clear that any future analysis, would demand a treatment of the IE voiced palato-velar **ǵ$^{(h)}$* and its mysterious development in the Luwian branch. Loss of old IE mediae velars (also referred to as voiced velars and lenis velars) in the Luwian branch is a well attested development (Kimball 1994; Melchert 1987, 1994, 2012; Starke 1987; Tischler 1990; Oshiro 1988; Oettinger 1976). Three cases are consistently referenced as evidence of this phenomenon: CLuw. *tiu̯amm(i)- 'earth'* from PIE **d^{h}éǵōm* , *īššara/i- 'hand'* from PIE **ǵ^{h}ésr-* and *immara/i- 'open field'* from PIE **ǵ^{h}emr-*; while HLuw. *takami 'earth'* (dat. sg.) is often cited as a counterexample, where the inherited media velar has been retained.

The loss and retention of lenis velars has received various explanations in recent treatments. Oettinger, (1976: 101), assumes loss of PL. **g* (PIE **g *ǵ *g^{h} *ǵ^{h}*) in initial & intervocalic positions. Tischler (1990: 89-91) assumes general loss in pre- and intervocalic position of Proto-Luwian **g* and Starke (1987: 249) posits a general loss with retention of **ǵ^{h}* as **g* before consonants and a change of Proto-Luwian **g* (PIE **g *ǵ *g^{h} *ǵ^{h}*) to *z-, -zz-* before Proto-Luwian **a*. The situation, however, still remains unclear, due to the lack of strong, compelling etymologies that may serve as proto-forms, while, those that indeed are available, simply do not cover a big enough variety of phonological environments, so as to indicate the conditioning for the various outcomes. Below, we will briefly treat a few cases of

velar-loss in Luwian, in an attempt to establish a sound-law that might reveal the original shape of *tiia̯mm(i)-* and *takamī.*

ǵ$^{(h)}$
CL *īššara/i-* / H.L. *istri-* < **ǵ^{h}esr- 'hand'*
CL *tiia̯mma/i-* < **d^{h}égōm 'earth'*
CL *parraia̯-* < **b^{h}erǵ^{h}oi̯- 'high'*
CL *immara/i-* < **ǵ^{h}emr- 'open country'*
CL *ḫarraia̯* < **h$_2$erǵoi̯- 'silver'*
CL *nāna-* < **néǵno- 'brother'*
HL *ást-* < **ǵ^{h}osd- 'hunger'*
CL *tāin-* < **soǵ^{h}én- 'oil'*

Table 9. Lost Luwian velars

2.2.1. CL *īššara/i-*, CL *immara/i-*, CL *tāin-* and the vocalic outcome *-i-*

Both CL *īššara/i-* and HL *istri-* meaning *'hand'* relate to Hittite *keššar/ kiššer- / kiššr- 'hand'* and go back to PIE **ǵ^{h}ésr-* (Starke 1987: 265, Kloekhorst 2008: 546). They must go back to a Proto-Luwian **issra/i-* (with gemination of the **s* in the cluster **-sr-*) which in turn virtually reflects a thematicized preform **ǵ^{h}ésr-o-* (Kloekhorst 2008: 546). Of particular interest here, is the plene spelling in the Cuneiform Luwian forms *i-iš-ša-ra/i-* which likely points to a phonetic intepretation [jíssra/i-]. According to (Melchert 1994: 254) this points to an innovation of **ǵ^{h}* > **i̯* before a front vowel **é* followed by a raising of **é* > *í* after **i̯*. However, since this spelling is only partially attested in Cuneiform Luwian and unnatested in Hieroglyphic Luwian, it is very likely that the sequence /ji-/ was quickly reduced to /i-/.

A similar explanation can be offered for *immara/i-* connected to Hittite *gimra-* and going back to either a thematicized **ǵem-ro-* (Melchert 1994a: 254) or **ǵim-ro-* (Kloekhorst 2008: 551). A form **ǵim-ro-* ties more closely ties to the Hittite data, but the form **ǵem-ro-* matches perfectly with the preform for *īššara/i-* leading me to favor this reconstruction and assume the same development.

The same chain development **ǵ^{h}é > *i̯é > í* can also be reconstructed for *tāin-*, connected to Hittite *šākan/ šakn- 'oil'* and seemingly reflecting a preform **soǵ^{h}én-.* Interestingly, it has been attested with both a single spelled *-i-* like *ta-a-in* and with a plene spelled *-i-* like *ta-a-i-in*. The latter is phonetically interpreted by (Starke 1990: 240) as [ta:jin] with a familiar sequence /ji-/ apparently reduced to /i-/ exactly like the two previous words.

2.2.2. CL *ti̯iamma/i-* and preservation of the glide *-i̯a-*

In opposition to the above group, lies Luwian *ti̯iamma/i-* which instead shows an outcome *-i̯i̯a-.* The reconstruction of this particular word is the subject of much debate; briefly however, it can be best explained as follows. To account for the geminate *-mm-* the vowel *-a-* must reflect an accented **é* which would have triggered Čop's Law and geminated the nasal. The sequence *-i̯i̯-* clearly arose from the lost velar, which turned into a glide before the front vowel. I would thus like to follow Kloekhorst (2008: 994) in reconstructing a preform **d^{h}ǵémi.* This **d^{h}ǵémi* would then correspond to the old PIE i-locative, also attested in Vedic *kṣámi*. For the outcome which contrasts the previously established development, it could perhaps be said that a cluster **-Cjé-* behaves differently than **-jé-* and instead regularly yields *-i̯i̯a*

2.2.3. CL *parrai̯a-*, CL *ḫarrai̯a-*, CL *nāna-*, CL *tāin-* and lengthening

On the other hand, *parrai̯a-, ḫarrai̯a-, nāna-* and again *tāin-* are a bit more difficult to interpret, as the velar here is not reflected directly, but seems to have had some-kind of lengthening effect. Firstly, in *nāna- 'brother'* related to Hittite *nekna-* from a proto-form **néǵno-* we see a long *-ā- as the outcome of short accented *é* next to the velar. Such a development is not normally assumed for sort accented **é* and we therefore must assume it is the effect of the velar that causes lengthening..

Luwian *parraḭa-* *'high'* is connected to Hittite *parkiḭe/a-*, *park-* *'to raise, to elevate'* and *parku-/ pargau-* *'high'* ultimately going back to PIE **b^{h}erǵ^{h}-*. Where the Hittite adjective shows an u-stem, the Luwian adjective must have been an i-stem, its ablaut-grade however is unclear. Melchert (1994a: 254) assumes a preform **b^{h}erǵ^{h}-V-* which he expects to give Proto-Luwian **bár-V-* by complete loss of the velar and subsequently **bárr-V-* through application of Čop's Law, where the resonant is geminated after short accented **é*. If this were the case, however, and the velars were lost without a trace, we would not have had *nāna-* form **néǵno-*, but **nana-** instead. And if we applied Čop's Law onto that, eventually we would have gotten **nanna-**. Instead, what I would like to suggest, is that the geminate resonant in *parraḭa-* has the same origin as the long *-ā-* in *nāna-*. In other words both are lengthened by the lost velar. Since, we have thus separated the vocalism in *parraḭa-* from the issue of Čop's Law, I would also like to use a different reconstruction; one which in my opinion better reflects the original shape of the Luwian i-stem. Hence, for *parraḭa-* I shall reconstruct **b^{h}r̥ǵ^{h}óḭo-*, as a vocalism **-rǵ^{h}é-* would perhaps had resulted in a cluster **-rrya-** where it is uncertain whether assimilation would had taken place.

The hypothetical word *ḫarraḭa-* meaning something like *'white'* or *'silver'* is in fact nowhere attested as such. Instead it is posited by Starke (1990: 424) on the basis of *ḫa-ra-an-za ša-ka-an-ta-ma-an-za 'appliqued with ḫ.'* and the Hieroglyphic Luwian mountain name *Haraharaisa 'The Snow-white Peak'* with assumed reduplication. If we are to believe in this hypothetical word *ḫarraḭa- 'silver'* we might also follow the connection to Hittite *ḫarki- 'white'* and assume they both derive from a root **h$_2$rǵ-i̯-* with uncertain ablaut. Given how similar this *ḫarraḭa-* appears to *parraḭa-* I will also reconstruct a preform **h$_2$rǵ-óḭo-* and assume the same developments.

Lastly, in *tāin-* < **soǵ^{h}én-* we can also clearly see the lengthening effect of the lost velar onto the unaccented **o* which would otherwise not yield a long *-ā-*. As a result, we might perhaps describe a rough tendency exhibited by the disappearing velar to lengthen any preceding vowel or resonant. In the case of *tāin-* this would imply that the velar partakes in two unrelated developments: the lengthening of **o* seen here and the chain **ǵ^{h}é > *i̯é > í* seen above. This situation

though, does not seem problemtic to me, as the velar might as well affect all the elements in its imediate environment before it is lost.

2.2.4. HL *ást-* and complete loss.

Compared to the rest, Hieroglyphic Luwian *ást-* may seem rather unremarkable. It has been interpreted as *'hunger'* (Melchert 1987: 185) allowing a connection to Hittite *kāšt-*/ *kišt-* and thus going back to a preform **ǵʰósd-*. Not much else can be said about this connection, other than it shows an unprecedented complete disappearance of the velar without any trace.

2.2.5. Summary

While going through the various individual cases and more generalized patterns of loss, two obvious questions arise: (1) what shared phonological environment conditions the loss of lenis velars in Luwian? and (2) can there be a single set of phonological rules, that predicts all the types of attested outcomes? For the latter, an answer will be sought in the following chapter, where the phonetics of the phenomenon are being discussed. For now, it suffices to answer the former question. The table below contains again the list of data relevant to velar-loss, but with their directly transposed PIE reconstructions.

***ǵ*(ʰ)**	CL *īššara/i- 'hand'*	[ísːra/i-] < [jísːra/i-]	**ǵʰésr*
	HL *istra/i- 'hand'*	[ístra/i-] < [jístra/i-]	
	CL *immara/i- 'open-country'*	[ímːra/i-] < [jímːra/i-]	**ǵʰémr*
	CL *tiia̯mma/i- 'earth'*	[tjámːa/i-]	**dʰǵémi*
	CL *parraia̯- 'high'*	[pərːáːja/i-]	**bʰr̥ǵʰóia̯o-*
	CL *ḫarraia̯- 'silver'*	[χərːáːja/i-]	**h₂r̥ǵóia̯o-*
	CL *nāna- 'brother'*	[náːna-]	**néǵno-*
	HL *ást- 'hunger'*	[ʔáːst-]	**ǵʰósd-*
	CL *tāin- 'oil'*	[taːín-] < [taːjín]	**soǵʰén-*

Table 10. Lost velars & Accented vowels

By having such a larger overview of the data, many similarities can be found, but one variable seems to be satisfied in all instances: namely proximity to an accented vowel. Based on a comparison of the most likely reconstructions for the attested form, it appears that in all proto-forms, the soon-to-be-lost velar is always directly before, or directly after the accented vowel. This observation is then far too attractive to dismiss, and thus I would like to assume that this must be the conditioning factor we have been looking for. Let us then formulate a rough rule based on the evidence for "loss", that a lenis velar is lost in Luwian, when it stands directly next to the accented vowel in the proto-form.

2.2.6. HL *takamī*

On the opposite side, we notably find Hieroglyphic Luwian *takamī*. Of course this is far from the only case of mediae velar retention in Luwian, but once we have established such a clear correlation between velar loss and proximity to the stressed vowel, it only suffices to show that this word does not obey that pattern. Furthermore, since we are only entertaining this short investigation on Luwian velars, for the purpose of treating the Anatolian **d^{h}égōm* words, there is no need to treat other cases of retention.

In the attempt to determine the proto-form of *takamī*, I strongly believe, that the answer lies at the same place where the original problem started: its ambiguous orthography. If we take another closer look at the inscription, we will notice that the word-final *-I* is spelled plene. However, in hieroglyphic Luwian it is not generally commonplace to utilize plene spelling for the marking of long vowels, as in the cuneiform tradition. Plene spelled signs, instead, are often used as column fillers, for aesthetic purposes, so as to not allow a gap at the end of a column.

Image 2. HLuw *takamī* in the SULTANHAN inscription

However, if we pay close attention to where *takamī* starts, we see that it does so in the middle of a column and not at the top of one, in contrast to the rest of the words in the surrounding columns. Therefore, it seems unlikely to me, that the plene spelling is intended as a column filler, when such an outcome could had been achieved with a different arrangement of the signs. Consequently, since this particular orthographical choice to spell the hapax *ta-ka-mi-i.* with a plene /i/ is neither meant to represent the length of the vowel nor to function as a column filler, only one possible interpretation remains: namely that it intends to represent the presence of a stressed vowel either /-í/ or /-í:/.

If that is indeed the case, the most obvious ablaut-grade for a reconstruction would be the dative of the PIE earth-paradigm, *$*d^{h}ǵméi̯$* as reconstructed in Kloekhorst (2008: 994). In this proto-form then, the velar is not directly next to the accented vowel, and thus it presents no problem for our established rule and its retention is to be expected.

2.2.7. Connecting the Dots

Rethinking the point I made earlier about the consequences of orthography in the native Luwian script, I suspect that a clue about the nature of the disappearing velar can be found in the most unlikely of places: not in any of the words that exhibit a glide from the original consonant, but in a word that preserves nothing from it; or at least so it seems. The Luwian *ást-'hunger'*, cognate with Hittite *kašt- 'hunger'* going back to *$*ǵ^{h}osd$,* is spelled in the hieroglyphic script with the sign <*á*> the interpretation of which is a matter of debate. Following the traditional view, this sign is simply read as [a] and for us here would mean complete loss of velar wthout any trace. However, Kloekhorst (2004), based on etymological grounds, makes a reasonable proposal that the sign <*á*> instead represents a syllable [ʔa] with a glottal stop.

If that is indeed the case, then Luwian *ást-* should be interpreted as [ʔá:st-] -taking into consideration vowel length. This would then mean for us, that the velar is not entirely lost, but instead retained as a glottal stop; paving the way for a new solution to the problem. What if a glottal stop is not just one of the outcomes of a lost lenis velar, but the regular outcome? Suddenly, some of our established

rules gain an entirely different meaning: the gemination in *ḫarraa̯ia* and *parraa̯ia* and the vowel-lengthening in *nāna-* and *tāin-* become an assimilation of the glottal stop into the preceding sound. The former can be written as *-VrʔV́-* → *-Vrː V́-* and the latter as *-V́ʔ-* → *-V́ː-*. Both of these developments have counterparts in Hittite, but with the regular glottal stop *$*h_1$*: as in *$*h_1orh_1ei̯$* → *a-ar-ri 'he washes himself'* and *$*d^héh_1t$* → *te-e-et 'he said'.*

This solution however, is not enough, since it does not account for the well attested glide-outcomes. Half of the answer to that problem, can easily be proposed in the form of a depalatalization rule. It is no coincidence, that the same cases that are now satisfied by only a glottal stop, are also the same cases for which we do not find a palatal glide in the attested form. These are namely: *parraa̯ia-* < *$*b^hr̥ǵ^hóo̯io-$*, *ḫarraa̯ia-* < *$*h_2r̥ǵóo̯io-$*, *nāna-* < *$*néǵno-$* and *ást-* < *$*ǵ^hósd-$*.* At first glance, they share very little in common. However, oppositely, the cases that do need a glide: *īššara/i-* < *$*ǵ^hésr$*, *immara/i-* < *$*ǵ^hémr$*, *tāin-* < *$*soǵ^hén-$* and *tii̯amma/i-* < *$*d^hǵémi$* all share a sequence *$*ǵ^(h)é-$*.* As a result, we can formulate a depalatalization rule, that must have taken effect at some point before the loss of the lenis palatovelar. According to this new rule, any palatovelar that is not followed by **e* gets depalatalized; meaning any palatovelar followed by either **o* or a consonant. Thus, in these cases after the depalatalization, the subsequent step would be a debuccalization; in other words [k^j] > [k] > [ʔ].

I now suggest, that we assume an almost identical process for the glide-outcomes, only without the depalatalization step. During the debuccalization step, then the surviving palato-velars and all labio-velars (there is no de-labialization taking place) split into their two phonological components, the velar-turn-glottal part and the glide part; in other words [k^j] > [ʔj] and [k^w] > [ʔw]. Finally, the glottal stop will be lost in these cases, leaving only the glide behind -and perhaps a lengthened preceding vowel. A surprisingly similar, but entirely unrelated development is also attested in the Hittite fortis labiovelar. As we can see in the form *tar-ú-zi 'he dances'* from **térk^{w}ti* the labiovelar **k^w* in the cluster **rk^{w}C* loses its buccal part and leaves behind a labial glide. Yet, even though this Hittite phenomenon is highly conditioned and concerns fortis labiovelars and not lenis as in Luwian, it serves as a perfect parallel to the development proposed here for Luwian lenis palato-and labio-velars velars.

Of course forms like *tiịamma/i-, īššara/i-* and *immara/i-* which do retain the palatal glide, would not reflect the glottal part of the outcome [ʔj] as the glottal stop would be lost in these positions; there is one word, however that does. Luwian *tāin-* from **soǵʰén-* has been used for two separate arguments already: once with *nāna-* as an example of vowel length caused by a lost velar, and once together with *īššara/i-* and *immara/i-* as an example of **-ǵ(ʰ)é-* > *i.* Therefore it seems to require both a glottal element to the left, in order to lengthen unaccented **o* as well as a palatal glide to the right to turn [-jé-] > [-í-], or in other words, a word-medial cluster [ʔj] in the potiotion of the velar. So, a pre-form **soǵʰén-* will give pre-Luwian [tokʲén-] which retains its palatovelar before **e*, later [toʔjén-] where the velar has been debuccalized next to the accented vowel, then [to:jén-] > [ta:jín] where the glottal part has lengthened the vowel and the palatal glide has changed the quality of **e* and eventually the attested [ta:ín-].

Consequently, this evidence offers support to the idea that the general outcome of the "lost" Luwian velar was not zero, but a glottal stop, either alone or followed by a glide, depending on the circumstances: if not depalatalized for palatovelars and always for labiovelars. If we then go back to our earlier conclusion about the "loss" of the lenis velars, we are now in position to update our rule and say that: a lenis velar is debuccalized when in proximity to an accented vowel in the reconstructed proto-form. We can then combine this with our depalatalization rule and our glottal-assimilation rule to fully formulate an account for the behaviour of lenis velars in Luwian. The depalatalization rule would come first, then the debuccalization, then the glottal-loss and at last any vowel-related shifts, like /jí/ > /í/. These rules in their proper order, are listed in the table below; the abstract environments are not indicative of all possible sequences, but instead reflect those actually attested in the data:

LOSS OF LENIS VELARS						
			DEPALATALIZATION	DEBUCCALIZATION	GLOTTAL-LOSS	VOWEL-SHIFTS
Gʲ	***-GʲV́-***	*-Gʲé-	*-Gʲé-	*-ʔjé-	*#ʔjé-	*#í-
					*-V:jé-	*-V:í-
					*-Cjé-	*-Cjá-
		*-Gʲó-	*-Gó-	*-ʔó-	*#ʔó-	#ʔá:-
					*-r:ó-	-r:á:-
	-VGʲC-	*-VGʲC-	*-VGC-	*-VʔC-	*-V:C-	-á:C-

Table 11. The rules of Luwian velar loss

2.3. Conclusion

Nevertheless, very little can be said about a Proto-Luwian paradigm for the earth-word. It is implied by the Hieroglyphic data, that a highly ablauting paradigm was still in use within Proto-Luwian itself, showcasing a dative **tkmí* from PIE **dʰǵméi*; while from the cuneiform data we can say that the word knew a locative **tʔjémmi*, corresponding to Sanskrit *kṣámi* both deriving from PIE **dʰǵémi.* Based on this meager information, we might also imagine that the genitive would have been similar to what we saw for Proto-Hittite above, and that Proto-Luwian had probably lost the endingless-locative that survived in Hittite (just like Hittite lost the locative that survives in Luwian). Also, if we applied our new sound-laws for the loss of lenis velars, we might imagine a speculative nom.-acc. **tḗʔan*. Thus, by the application of regular sound-laws Proto-Luwian would be faced with the following, inherited paradigm.

	PIE	PROTO-LUWIAN
NOMINATIVE	**dʰéǵōm* */déˀgʲōm/	**tḗʔan*
ACCUSATIVE	**dʰéǵomm* */déˀgʲomm/	
GENITIVE	**dʰǵmés* */dˀgʲmós/	**tkmā́s*
DATIVE (LOCATIVE)	**dʰǵméi̯* */dˀgʲméj/	**tkmí*
LOCATIVE	**dʰǵémi* */dˀgʲémi /	**tʔjémmi*

Table 12. The Proto-Luwian paradigm

It is immediately surprising, how these four forms with such different shapes, coexisted in the same paradigm. This morphological inconsistency, I suspect might have been the primary reason for the apparent leveling that took place in Cuneiform Luwian, with the spread of the locative stem **tʔjémmi-*. On the surface, the form **tʔjémmi* would at some point in the evolutionary history of Luwian both look and behave like a dative-locative of a Luwian i-stem. Take for instance the noun *masanis 'god':*

NOMINATIVE	*masanis*
ACCUSATIVE	*masanin*
DATIVE-LOCATIVE	*masani*
GENITIVE	*masanasa, masanasi*

Table 13. A regular Luwian i-stem

If we assume that the locative **tʔjémmi* might had been used more often relative to the other cases in its paradigm, with the old category of the i-locative lost, Proto-Luwian **tʔjémmi* could had been reanalyzed as a regular dative-locative, as it would had already been used with a locative meaning. Following the pattern of the Luwian i-stems, this dative-locative **tʔjémmi* was matched with a new nominative **tʔjémmi-s* and a new accusative **tʔjémmi-n*.

	PROTO-LUWIAN			CUNEIFORM LUWIAN
NOMINATIVE	**téʔan*		**tʔjémmis*	/tjámmis/
ACCUSATIVE			**tʔjémmin*	/tjámmin/
DATIVE-LOCATIVE	**tkmí*	**tʔjémmi*		/tjámmi/
LOCATIVE	**tʔjémmi*	-	-	-

Table 14. Spread of the locative stem in Luwian

This account can conveniently explain the surprising productivity of the old locative stem in the remodeling of the Luwian **d^{h}égōm* paradigm, as well as its change back to common gender, after it had first become a neuter with the merge of the PIE nominative and accusative into a single case (the Proto-Luwian **téʔan*).

3. The PA Paradigm

3.1. The Direct Cases

Thus, we may now combine the various elements from the two individually reconstructions, in order to reconstruct the original Proto-Anatolian forms. Based on the Hittite evidence alone we would be inclined to reconstruct a neuter noun for Proto-Anatolian with a single nominative-accusative case; even though two separate cases are regularly reconstructed for PIE: nominative **d^{h}égōm* next to accusative **d^{h}égomm*. The Luwian forms being derived from the oblique stems of the original paradigm offer no insight on the matter, allowing us to simply transpose the Hittite nom-acc into PA, more or less unchanged. The most obvious difference, would be the reading of an original palatovelar **k^{j}*, instead of the plain velar found in Hittite, since this is necessary for the glide in Luwian *tiiamm(i)-*. The vowel **a* is reconstructed as short for PA, even though it results from long **ō* (as well as short **o* in the case of the accusative). This is done so, by assuming a shortening of long **ā* in an unaccented position already in Proto-Anatolian. We may thus reconstruct the PA nom-acc as **tḗk^{j}an.*

However in KBo XIII 260 iii 1fT (Starke, 1985: 260) we find the forms *ḫa-at-ta-ra-am-ša-an, mu-ḫa-at-ra-am-ša-an, pí-iz-za-ar-na-am-ša-an* and *tu-u-ri-im-ša-an* being accusative forms of the animate nouns *ḫatt(a)ra-, muḫatt(a)ra-, pizzarna-* and *tūra/i-* respectively. These four cases are exceptional in that they seem to preserve the PIE acc.sg ending **-om* as *-am*, instead of the regular *-an*, here before the enclitic possessive *-šan*. Such a preservation is otherwise unknown for either Luwian or Hittite, but suggests that the common change of **-om* to *-am*, is in fact not a shared innovation. and that world-final **-m* was preserved in Proto-Anatolian. This piece of information, changes our reconstruction of the PA nom-acc to **tḗk^{j}ām.*

3.2. The Oblique Cases

In a similar fashion, most oblique cases for PA, would resemble the forms we predicted for Proto-Hittite, with the only major difference being the palatovelar, dictated by the Luwian evidence. Thus, we may write gen. **tk^{j}mā́s* and dat. **tk^{j}mí*. The latter is also directly reflected in Luwian *takamī* [tkmī] with the underlying phonological shape of the synchronic form being nearly identical to the

PA reconstruction. Next to these two, we may also include a locative **tkʲā́m* from Hittite *tagān* < Proto-Hittite **tkā́n.* While finally, we shall also add a second locative **tkʲémi* as the source of the Luwian stem *tiia̯mm-*. However, is such a system, with two distinct locatives, attested anywhere else outside the family of **dʰégōm* words?

Surprisingly, there does exist a nearly identical parallel, identified in the inflected adverbial stems of Anatolian. The Anatolian evidence clearly indicates that we are dealing with an archaic nominal paradigm, various forms of which have fossilized as adverbs in Hittite and Luwian. This way, the Cuneiform Luwian *šarra* 'upon' read as /sárra/ clearly reflects a proto-form **sér-o*; whereas in contrast the Hittite *šarā* 'upwards' read as /srā́/ must continue an old allative **sró* (Kloekhorst 2008: 842). To this slowly growing paradigm, we could also add the pair of Hittite *šēr* 'above' and Cuneiform Luwian *šarri* 'above'. For Melchert (1984: 88) both of these seemingly descend from a common source, the old locative **séri*, with the Hittite form explained through a loss of the final **-i*. With regards to the Luwian word, the dative-locative solution is perfectly reasonable; for Hittite *šēr*, however, I would instead follow Kloekhorst (2008: 860) and interpreting it as an endingless locative **sḗr*. This decision now creates a unique situation, where a single paradigm, in Proto-Anatolian, synchronically contains two distinct 'locative' cases: an i-locative of the shape **C(C)éCi*, surviving in Luwian and an endingless locative of the shape **C(C)éC* surviving in Hittite.

This pseudo-nominal pair then directly mirrors the situation for Anatolian 'earth'. The Luwian equivalents match directly onto each other. The geminate resonant in Luwian *šarri* read as /sárri/, results from **séri*, in the exact same fashion that the geminate nasal does in /tjámmi-/ from reconstructed **dʰǵémi*. This would be the result of the previously discussed Čop's Law, showing gemination of intervocalic consonant after short accented vowel. The vowels in the forms also match each other perfectly, strengthening the hypothesis that the reconstructed **dʰǵémi* must have been an old Proto-Anatolian i-locative.

C(C)éCi			
LUWIAN	/sárri/ < *séri	= 	/tjámmi-/ < *d^hǵémi	**Ø-LOCATIVE**
C(C)éC			
HITTITE	/sḗr/ < *sḗr	= 	/tkā́n/ < *d^hǵṓm	**I-LOCATIVE**

Table 15a. Locative pairs

The Hittite equivalents on the other hand, do not match in their ablaut grade just as well; with a long e-grade in *šēr* from **sḗr* as opposed to a long o-grade in /tkā́n/ from **d^hǵṓm*. Perhaps, this could be hesitantly disregarded, as the two Hittite forms otherwise match fully in their case, the endingless-locative, and thus still serve as a foil to the i-locative attested in Luwian, still allowing for a meaningful comparison to be made. However, even if the case is indeed an Indo-European endingless-locative, the long o-vocalism required for the Hittite reconstruction, is morphologically speaking, difficult to reconcile with our knowledge of the Indo-European accent-ablaut classes. These would predict an endingless locative of the shape **d^hǵém* with an e-grade or maybe **d^hǵḗm*, being a lengthened monosyllable. This would then be exactly identical to its pair **sḗr*, but unfortunately no preform with an e-grade can account for the Hittite data.

A most attractive solution to this vocalism problem, though, is recently proposed by Kloekhorst (frth: 10), who manages to bridge the gap between the Hittite-derived proto-form **d^hǵṓm* and the regularly predicted PIE form **d^hǵém*. This is achieved, by a newly proposed pre-Proto-Indo-European sound law, **-ĕm > *-ŏm*. This development is highly conditioned, describing the coloring of an earlier **ĕ* to **ŏ* in the position before word-final **-m*. Naturally, this must had taken place before the split of the Anatolian branch from the rest of Indo-European, as it is necessary to explain the Hittite, and therefore the Proto-Anatolian endingless locative.

Kloekhorst (frth) thus chooses to reconstruct the Proto-Indo-European (for us here that would correspond to the pre-Proto-Anatolian) endingless locative of the earth-word as **d^{h}ǵóm*, and then traces that back into a pre-PIE form **d^{h}ǵém*, through his assumed sound law. He then goes on to assume that this pre-PIE **d^{h}ǵém* is the result of an even earlier **d^{h}ǵém*, that experienced a lengthening of its vowel, possibly conditioned by its position in an accented monosyllable ending in a resonant. For us here, it suffices to keep in mind, that the form **d^{h}ǵóm* can be regarded as the regular outcome of a formally predictable locative **d^{h}ǵém*; thus completing the symmetry between the two pairs.

****C(C)éCi***			
LUWIAN	**séri* > /sárri/	**=**	**d^{h}ǵémi* > /tjámmi-/	**Ø-LOCATIVE**
****C(C)éC***			
HITTITE	**sér* >/sér/	**=**	**d^{h}ǵém* > **d^{h}ǵóm* > /tkán/	**I-LOCATIVE**

Table 15b. Locative pairs

4. Conclusion

In summary, if we take into account all of the above observations, we are now in the position to reconstruct the complete paradigm for the Proto-Anatolian earth-word. This is presented in the table below:

NOMINATIVE-ACCUSATIVE	**tékʲam*
GENITIVE	**tkʲmás*
DATIVE-LOCATIVE	**tkʲmí*
I-LOCATIVE	**tkʲémi*
Ø-LOCATIVE	**tkʲám*

Table 16. The Proto-Anatolian paradigm

Proto-Anatolian **tḗkʲam 'earth'* would have therefore been an amphidynamic, inanimate noun, with two distinct locative cases. The exact semantic distinction of the two, though is unfortunately difficult to determine, since no Anatolian language preserved both of them, so as to show some kind of contrast between the two; however if both Hittite and Luwian abandoned one in favor of the other, this might be some indication that any semantic distinction that might had been inherited from the PIE ancestor, was slowly being lost by the time of the first inner-Anatolian split.

Furthermore, being an inanimate noun, **tḗkʲam* must have had an animate counterpart, either in the form of a regular ergative case, or perhaps in the form of a compound noun, like Hittite *tagānzepaš*. However, the exact nature of the animate counterpart, is also difficult to determine, though it does not seem unlikely to me, that it might have had a regularly derived ergative in order to fulfill the syntactical need. This in turn could have been replaced in Hittite by a word that was clearly meant to signify some sort of deity/ spirit, which was later generalized into a functionally ergative form. Yet, what other earth-words might have also been there in Proto-Anatolian, alongside **tḗkʲam*?

Chapter IV

Shifting Semantics &

Words not from *$*d^{h}égōm$*

1. Introduction

With the conclusion of the first thematic chapter of this thesis, it is perhaps now time to move onwards to the second half of my initial research question, and have a look at those Anatolian languages that do not employ a **d^{h}égōm* word as their primary word for 'earth'. This is not to say that they cannot have any descendants of the **d^{h}égōm* family; but that these cognates must have undergone a semantic shift, like the HLuwian takamī meaning not 'earth' but 'land; country'. In response, some other Anatolian word with semantic akin to 'earth' underwent a complementary shift, taking over this new meaning.

2. Hieroglyphic Luwian TERRA*taskwara/i-*

Given the reliable usage of the logogram TERRA (discussed before in relation to TERRA*takamī*), the meaning of this word becomes clear as *'earth, land'*. Already in Hawkins (2000: 30) we find a connection to Hittite *kuera- 'field'* from *kuer-/ kur-/ kuar- 'to cut'*; this analysis would also relate *taskwira/i-* back to CLuwian *kuar-/kur- 'to cut'* and HLuw *kwar- 'to cut'* and ultimately the PIE root **k^{w}er-/ *k^{w}r- 'to cut'.* However, just like with *takamī* -the other HLuw. term treated herein- uncovering the underlying phonological shape of this word is also rather challenging, and regarding the spelling and phonological interpretation of *taskwira/i-*, I would first wish to highlight four key points:

1) For starters, the often sited HLuwian *taskwira/i-* is actually spelled as *ta-sà-kwa/i+ra/i-*, therefore, it is not possible to know with certainty whether it is a three-syllable word, as normally transcribed, or a four-syllable word, with a real vowel /a/ in the syllable /-sa-/.
2) However, the particular choice of the sign <*sà*> may actually reveal information about the character of both the supposed vowel and its proceeding consonant. Rieken (2010) has convincingly argued that the sign <*sà*> in fact denotes a palatalized [ʃa], which is phonetically distinct from any other sa-signs; and although for the time being this is not yet indicated in the transliteration of this sign, it should be taken into consideration. This phoneme /ʃ/ is described as having normally arisen near palatal elements in the prehistory of Luwian. However, since there are no evident palatals around the sibilant, one possibility is that this /ʃ/ might have arisen by

proximity to the velar sound in *-kwa/i-* (Rieken 2010). This scenario would necessitate that there is no other vowel in between the sibilant and the velar, allowing us therefore to ignore the vowel in the syllable *-sà-* and instead read the beginning sequence as /taʃkwV-/

3) Most consequential, however, is the reading of that sign <*kwa/i*>. The vocalic element of this sign is ambiguous, as it either be /a/ or /i/, something that is also the case for other signs, like <*wa/i*>. This means that can theoretically read either /taʃkwa-/ or /taʃkwi-/ even if the word is regularly cited as *taskwira/i-,* but it is not fully clear which one we are supposed to choose. The answer to this dilemma, however, strongly ties to the etymology of the word, and is thus key for the present discussion.
4) In addition, the sign <*ra/i*> is encountered in Hieroglyphic Luwian, it could either be simply taken as an inherited /r/, or there is the possibility that it might be a result of rhotacism. Rhotacism is a phenomenon in Hieroglyphic Luwian, where an intervocalic dental lenis stop alternates with the phoneme /r/ (Morpurgo Davies 1983). In the spelling this can hardly be seen, given that consonant clusters are not shown by the script; but in our case we are indeed dealing with an intervocalic position for the /r/, positioned between the true vowel of the sign <*kwi*> and the vowels of the multiple case endings the noun receives. This phoneme could then perhaps be an original lenis /d/, phonetically interpreted as a fricative [ð] (Vertegaal 2019). It is therefore impossible to say with absolute certainty that the word was not underlyingly /taʃkwVða-/. However, that fact that we find no spelling with a ta-sign can be taken as strong evidence that the word actually did contain a true /r/ and must have therefore been /taʃkwVra-/.
5) On the other hand, the vowel in sign <*ra/i*> is not particularly important for the etymology of the word, since it is determined by the case ending: /-i-/ for the direct cases and /-a-/ for the oblique cases.
6) With regards to the position of the stress, it is not possible to determine by looking at the orthographic evidence alone. If perhaps a solution about its etymology were to be reached, we might then be able to assign stress to the word; but at this point such a choice cannot be made.

Returning to the suggested connection with Hittite *kuera- 'field'* and the PIE **k^{w}er-/ *k^{w}r- 'to cut'* we can see that the related part, is the second half of the word *-kwa/ira/i-*. So, if Hittite has a verb *kuer-/ kur-/ kuuar- 'to cut'* next to noun *kuera- 'field'* and Luwian has a verb CL *kuuar-/kur-* & HL *kwar 'to cut'* next to an acclaimed nominal element *-kwa/ira/i-*, I am heavily inclined to assume that Luwian *-kwa/ira/i-* directly corresponds to Hittite *kuera-* in both meaning and ablaut. Luwian *-kwa/ira/i-* thus, meaning *'field'* would reflect an e-grade of the PIE root **k^{w}ér-*. This could either stay a consonant stem **k^{w}ér-s* or be thematicized as in **k^{w}ér-os.* Either way, it would regularly yield Luwian *-kwa/ira/i-* which would then have to be read as [-k^{w}ːára/i-]. I would therefore wish to write this word as *taskwara/i-* instead, for the remaining of this chapter, that is dedicated to its etymology.

If we accept this connection to Hittite *kuera- 'field'* we would then be forced to divide the word as /taʃ/ + /k^{w}ːara-/, opening a question about the nature of this element /taʃ/. Of the treatments that draw a connection with Hittite *K*, the is none that provides an explanation of this element, thus leaving its semantic contribution to the compound and thus its etymology, a mystery. Here, I would like to suggest a tentative connection to Hittite *daššu-* meaning *'strong, powerful, important, heavy'* (Kloekhorst 2008: 985). The etymology of this word, is also far from certain, but Juret (1941: 51) connects this with Sanskrit *dáṃśas- 'miraculous power'* going back to a PIE root **de/oNs-* with a nasal of uncertain quality (Kloekhorst 2008: 985). From this PIE **deNs-* I would thus like to derive a Luwian preform **tas-* which will turn into /taʃ-/ in the compound due to following velar (discussed above).

Seeking to derive a form **tas-* from PIE **deNs-*, we might turn to HLuwian *has- 'to beget'* from PIE **h$_2$oms-* (Kloekhorst 2008: 372-4); while Melchert (1994a: 270) rather prefers **Hons-* assuming a PIE cluster **-ms-* would be retained in Luwian. This is not particularly problematic for our case, since the value of the nasal in **deNs-* is uncertain; but even if it were originally **m*, Melchert's (1994a: 270) counter-argument about **m*-retention could be countered. For the retention in CLuw *ammašša- 'to wipe'* we could follow Kloekhorst (2008: 374) in reconstructing **h$_2$omh$_1$s-i* where **-mh$_1$s-* behaves differently form **-ms-*. Whereas for the retention in the *-am=šan* accusatives (*ḫattaramšan, muḫatramšan,*

pizzarnamšan, tūrimšan) that do not regularly change the PIE accusative ending *-*om* into Luwian *-an*, we can assume a special development due to the complex consonant cluster in **deNs + k^{w}ér-*. This would then mean, that the regular outcome of a sequence *-VmsV- is -VmsV- as in the *-am=šan* accusatives, but the outcome of *-VmsCV- is -VsCV- as in the herein reconstructed form **deNs + k^{w}ér-*.

If we now bring the two Luwian elements together, we reconstruct a proto-form **deNsk^{w}ér(-o)-*. Lastly, following this account would also lead to one more change in the reading of *taskwara/i-*. Namely, the above pre-form **deNsk^{w}ér(-o)-* if comparable to **h$_{2}$oms-*, would produce a geminate /-ss-/. This is expectedly not rendered in the ambiguous, hieroglyphic script, and thus can be neither proven nor disproven. Based on etymological grounds alone, though we would have to read HLuw *taskwara/i-* as [taʃːkʷːára/i-].

Assuming, then, that we can derive hypothetical Luwian **tas-* from PIE **deNs-*; what would be its semantic contribution to the compound *taskwara/i-*? Hittite *daššu-* means *'strong, powerful, important, heavy'*, and is tied to Sanskrit *dáṃśas-* meaning *'miraculous power'*, but has no other established cognates within the Anatolian branch. In light of this, for the hypothetical PA word, we might also assume a similar meaning *'powerful, important'*. Hence, if PA **k^{w}ér(-o*)- meant something like *'plot of land, field* as accepted above, then the **deNsk^{w}ér(-o)-* would metaphorically be the *'great field, powerful land'*. This common-gender noun, could then perhaps be a way of expressing the "miraculous power" of an animate earth, a deity, in opposition to an inanimate, neuter earth that might had existed in primitive Hieroglyphic Luwian. This neuter earth would of course be **tḗk^{j}am*, which yielded marginal HLuwian *takamī*.

It is the case that, within Hieroglyphic Luwian, the word is often found as an ergative, especially when paired or contrasted with *tippas- 'sky'*. This is a little surprising given that it already is a common gender noun, and thus does not require an ergative in order to function syntactically. In the curse formula at BOYBEYPINARI 2, §21 we read:

"CAELUM"*ti-pa-sa-ti-sa-pa-wa/i-tu-u* "TERRA"*ta-sà-kwa/i+ra/i-ti-sa-ha*
CAELUM-*sa-ha* TERRA-*kwa/i+ra/i-sa-ha* DEUS-*ni-i-zi* LIS-*tà-ti* CUM-*ni* x-*tu*,
But Heaven and Earth and the gods of the heaven and the earth shall … for him with confrontation! (Hawkins 2000: 337)

However, according to Goedegebuure (2018: 106-109) this "ergative" suffix in Hieroglyphic Luwian expresses more of an individuating meaning, rather than an ergative one, and is used in order to personify its base. Its contribution, thus, I would say, is heavily semantic and seems to match with the idea that this word is used to denote an earth deity -often paired with a sky deity.

3. Lydian *kλida-*

The second case, of an Anatolian language with a non-**d^{h}égōm* earth-word, is Lydian and the term *kλida-*. This is attested once, within the Sardis Bilingual, a funerary inscription recorded in both Lydian and Aramaic datable to the early 4th century BCE. The word in question appears in the curse formula at the end of inscription, in what has been interpreted as the dative singular, *kλidaλ*:

fak-mλ artimus ipsimšiš artimu-k kulumšiš aaraλ piraλ-k kλidaλ kofuλ-k qiraλ qelλ-k pilλ wcpaqẽnt
"to him, Artemis of the Ephesians and Artemis of Coloe, to the yard and to the house, to the land and to the water, to the property and to the estate that are his, she [Artemis] will do damage"

The correspondence between the Aramaic phrase *ṭyn w-myn* 'soil and water' and its Lydian counterpart *kλidaλ kofuλ=k* was already established in Littmann (1916: 36) even though Littmann himself did not commit to a specific match between the Lydian and Aramaic elements. Nevertheless, all subsequent treatments of this pair assumed a match in word order between the two languages and assigned the meaning 'earth' to *kλida-* and 'water' to *kofu-*.

The present analysis will not seek to challenge this interpretation, as there is no obvious reason to suspect that the word order does not match for this pair as it does for the other sequences in the curse formula (yard and house… property

and estate); and also since an interpretation of *kofu-* as 'water' has already received a convincing etymology within Anatolian (linked to Anatolian river-words CLuw *ḫāpa/i-*, HLuw *hapa/i-* and in extend Hittite *ḫapa-*, from PIE **h₂eb^{h}o-* (Mouton & Yakubovich 2019: 222, n. 21)). Instead, accepting this as a valid translation, we will seek to establish a strong IE etymology and uncover links to other Anatolian words with similar semantics.

The currently prevailing reconstruction was proposed by Melchert (1994a: 338 & 1994b), who repeatedly connects Lydian *kλida-* with Greek *γλία* 'glue' and *γλοιός* 'sticky substance' both deriving form a Proto-Indo-European **gliH̯eh₂* 'to smear, to glue'. This was made possible after his discovery that PIE **i̯* could be one of the sources of Lydian *d* (Melchert 1994b). Gérard (2004: 128) on the other hand chooses to compares Lydian *kλida-* to Hittite *kulēi̯-* 'fallow lands'. This etymology, however, is phonologically unappealing, since from a Proto-Anatolian labiovelar **k^w* that is dictated by the Hittite form, we would have expected Lydian *q-*, which phonetically represents a labiovelar [k^w]. Lydian *kãna- 'wife'* < **g^{w}óneh₂-* and *kãn- 'dog'* < **ḱwon-* (Melchert 1994a: 349) could perhaps be used as counterexamples, showcasing a delabialization. Yet, both of these examples have the labial element directly in front of a back vowel **o*, which arguably caused the delabialization. All assumed preforms of *kλida-*, however, begin with a word-initial cluster **K$^{(w)}$l-* an environment in which the behavior of the labiovelar is otherwise unattested in Lydian. For the Lydian base **walwe- 'lion'*, though, where Melchert (1994a: 360) draws an etymological path from PIE **w̥l̥k^{w}o-* > PA **w̥l̥g^{w}o-* > Luwian *walwa/i- 'lion'*, Lydian **walwe- 'lion'* no labial element is lost around the liquid. Of course, the sequence is not a perfect match, but still it shows no sign of delabialization in clusters. Therefore, I remain confident, that if the proto-form of Hittite *kulēi̯-* were the source of the Lydian word, that would have yielded a sequence *qλ-*.

This variety in the two assumed sources, however, raises a question, as to what should we expect the preform of Lydian *kλida-* to have looked like? Let us then briefly investigate the possible phonological shape of the hypothetical Anatolian proto-form.

Detailed treatments of Lydian phonology (Kloekhorst 2023, Melchert 1994a: 329-55) generally agree on the origins of most phonological elements, facilitating our current task. First, a Lydian *-λ-* representing a palatal [ʎ], in a word

medial position, can be safely reconstructed with a PIE cluster *-*l̥i̯*-. On the other hand, an ending *-ida-* phonetically representing [-iða-] could originate form a widely diverse set of original sequences. The second vowel could go back to either a PIE *-*o*- or an *-*eh₂*- both yielding Lydian /a/. The first vowel could go back to either a vocalic *-*i*- or perhaps an *-*e*- proceeded by a palatal *-*i̯*-, as such pair *-*i̯e*- could yield Lydian -*i*- (see Ld -*id* < PIE *-*i̯edi* and Ld -*il* < PIE *-*i̯elo* (Melchert 1994a: 344). Finally, the dental fricative /ð/ could reflect any PIE sequence of the shapes *-*VdV*-, *-*Vd^{h}V*- or *-*Vi̯V*- (Melchert 1994b); the last one fitting well with the rest of the evidence for the presence of a palatal consonant in the word. As for the initial *k*- we again can have multiple options. The safest one would be to derive it from a plain velar or palatovelar, either fortis or lenis, but not a labiovelar as such would yield Lydian *q*-. However, there does exist on more option, deriving the Lydian *k*- from a Proto-Indo-European laryngeal, specifically **h₂*. If one recalls, the same sound correspondence was hinted above with Lydian *kofu*- 'water' from PIE **h₂eb^{h}o*- 'river'. This connection is also convincingly demonstrated by Oettinger (2021) who after a close examination of Lydian words attested in Greek sources and their proposed IE reconstructions, concludes that both and **h₂* and **h₃* could yield Lydian *k*. A word-initial cluster with a resonant is not listed amongst the attested phonological environments, but if such a retention is indeed possible the we might take it into consideration for our reconstruction. I thus see no problem with assuming a similar development here. Consequently, a hypothetical proto-form for Lydian *kλida*- could resemble the following: **(K$^{(j)}$/h₂)l(i/i̯e)(D/i̯)(o/eh₂)*

Needless to say that such a reconstruction is far from any real proposal, and leaves much to be desired, as several routes remain open. Thus, returning to Melchert's connection with Greek *γλία* from Proto-Indo-European **gli̯eh₂* we can appreciate the exceptional phonological similarity between preform and attestation. From a purely phonological standpoint, there appears to be nothing problematic with Melchert's reconstruction, as it perfectly matches our established pattern, with a palatovelar, an **l* followed by an **i* which splits into a vowel and a glide that will yield Lydia *d*, and finally a suffix **eh₂*. Personally, however, my concern with this, otherwise perfectly acceptable proposal, lies more within the semantics of the chosen IE root and its representation inside the Anatolian branch, or rather lack thereof.

The semantic leap from an IE root meaning 'to smear' onto the synchronic meaning 'earth' might seem a little big, but I am willing to accept this, if we suppose a transitional stage where the derived word meant something like 'clay; smeared earthen substance'. Even then, though, the most important problem is not addressed, namely, that the Indo-European root **gleḭ-* that gives Greek *γλία*, suffers from being completely unattested in Anatolian, leaving *klida-* with no cognates in any other Anatolian language. This turns into such a major concern in my opinion, due to the status of *klida-* as the primary words for 'earth' in Lydian, as I would expect to find at least one other cognate from the same root within Anatolian.

Such a more attractive cognate, I believe, can be found in the Hittite *ḫalinā-* 'clay'. This word appears only in the genitive case, referring to Hittite *teššummi-* and *zēri-*, both probably meaning 'cup', and so can be interpreted as a genitive of substance, with a meaning 'clay' (Puhvel HED 3: 32); a possibility that can otherwise not be ascertained, unfortunately. If we however, accept this translation, we may also accept Puhvel's proposed connection with the Greek *ἀλίνειν* 'to smear' and Latin *linō* 'to smear' that would ultimately point to a Proto-Indo-European root **h₂leḭH-*. Based on these views Kloekhorst (2008: 321) reconstructs the proto-form of Hittite *ḫalinā-* as **h₂lḭH-no-*.

The first half of the reconstructed Hittite form **h₂lḭH-* directly matches with the abstract shape established above, making it a prime candidate for the source of *klida*. So, to formulate a reasonable reconstruction for *klida-* we would only need to replace the derivational suffix found in Hittite, and instead of **-no-* add a siffix **-ḭo-*. Thus we would be left with a proto-form **h₂lḭHḭó-,* also meaning *'clay or soil'* just like its Hittite cognate. Therefore, the variably reconstructed Proto-Anatolian **h₂lḭHḭó-* or **h₂lḭHnó-* would simply mean something like *'clay'* or perhaps *'earth'* in the sense of the material or substance, as opposed to *'earth'* as a location or divine entity, meanings encoded by the primary word **dʰégʷōm*.

4. Replacing the old earth-word

Yet,, the more we seek to understand the etymological roots of these two terms, especially right after our extensive discussion of the status of the **d^{h}égōm* words in the Anatolian branch, the more we might find ourselves wondering: how was the original Proto-Anatolian earth-word replaced? Truly, the Luwian and Lydian cases are nothing alike: one replaces the **d^{h}égōm* word with a semantically complex compound, while the other with a seemingly mundane word for clay; one actually retains a form of the original **d^{h}égōm* paradigm -even as a hapax legomenon- while the other contains no cognates of the **d^{h}égōm* family, now that *Τιάμου* has been proven an impossible Lydian form. All in all, though the two languages show the same phenomenon, they clearly deserve two completely different approaches.

For the Lydian case on the one hand, very little can actually be said, due to the shortage of data. The very word, we assumed is the primary earth-word, is itself a hapax legomenon, providing us with almost no context as to its usage and semantics. It is impossible to know whether Lydian ever contained any real cognates of the **d^{h}égōm* word; nor do we have any likely cognates of Hittite *kuera-'field'*. The only thing we can actually say, is that the original clay-word expanded its semantic domain and slowly took over the more general meaning *'earth'*, perhaps as the original **d^{h}égōm* started growing more and more irregular due to regular sound-change.

The case of Hieroglyphic Luwian, on the other hand, is admittedly far more intriguing. If one recalls from Chapter II, the Luwian TERRA*takamī* does not exactly mean *'earth'*, at least not like TERRA*taskwara-*. Instead in its context, it seems to have a slightly more abstract meaning of *'land'* or perhaps even *'kingdom'*. In the SULTANHAN inscription we read (Hawkins 2024: 263):

E 1. § 38 ⌈*ni-pa-wa/i*⌉-*ta* |URBS+*MI-ni* |*hwi/a-sa-ha-a* |*ka-ti-i* |CRUS-*i*
2. § 39 |*ni-pa-wa/i-ta* |("TERRA")*ta-ka-mi-i* |*hwi/a-sa-ha* |*ka-ti-i* |*ta-i* ||
F 1. § 40 |*ni-pa-wa/i-ta* |*wa/i-na* |REL-*sa-ha* |*ka-ti-i* |CRUS-*i*

"or (if) anyone inclines to damage for the city, or (if) anyone inclines to damage for the land, or (if) anyone inclines to damage for the vine"

In contrast, in the same inscription $^{\text{TERRA}}$*taskwara-* appears three times (Hawkins 2024: 262-3):

A 3. § 11 |REL-*i-pa-wa/i* |(TERRA)*ta-sà*-REL*+ra/i* |2 "OVIS*"-sa* 80 "HORDEUM" CRUS+RA/I |

"indeed in the land 2 sheep stood (for) 80 (measures of) barley"

4. § 15 |("TERRA")*ta-sà*-REL*+ra/i-ri+i-pa-wa/i-ta*$^{-a}$ *mara/i*$^{+ra/i}$_ *wa/i-li-sá* |SUPER*+ra/i-a* |"PES$_2$*"(-)da-i |wa/i-ia-ni-sá-ha* ||

"and the corn-stem(s) will come up from the earth, and the vine"

D 33. b ("CAELUM")*ti-pa-sa-si-zi-pa-wa/i-na* |DEUS-*ni-zi* |("TERRA")*ta-sà-REL+ra/i-si-zi-ha* |VIR-*ti-zi* |FEMINA-*ti-zi-ha*

"the gods of the sky and of the earth, the male and the female!"

In the first two examples listed above, the word simply refers to the location *'earth'* the *'ground'*, where sheep stand and corn grows; whereas in the third example, it is slightly unclear whether the earth is simply mentioned as a location, governed by the *'gods of the earth'*, or whether the earth itself is deified and included amongst the *'gods of the earth'*. Nonetheless, the semantic contrast of $^{\text{TERRA}}$*taskwara-* and $^{\text{TERRA}}$*takamī* is clear.

It is well established, that $^{\text{TERRA}}$*takamī* is etymologically older than $^{\text{TERRA}}$*taskwara-*, being a direct descendant of the original PIE **d^{h}égōm* word and thus predating the formation of the Proto-Luwian compound **deNsk^{w}ér(-o)-*. So, if *takamī* was the original Luwian earth-word, what could have possibly lead to its replacement by the later compound. The answer, I believe, lies in the grammar itself. Early in Chapter II we had an extensive discussion about the gender-shift of the PIE feminine noun **d^{h}égōm* to the Hittite neuter noun *tēkan*. Subsequently in Chapter III, comparison of the Anatolian data led me to reconstruct the Proto-Anatolian earth-word **tḗk^{j}am* also as a neuter, viewing the phonological merge if the PIE direct cases as a rather early change in the history of Proto-Anatolian. This, I suspect, left the Anatolian ancestral language with a grammatical/ semantic gap, as a neuter noun, in other words an inanimate noun, was grammatically unable to express a personified animate entity; in our case, the personified earth-deity.

As we saw in Chapter II, Hittite gave an answer to this linguistic problem by introducing the animate noun *tagānzepa-* meaning *'earth-spirit'*, which it utilized grammatically in the place of an ergative case for *tēkan.* This makes me wonder, whether Hieroglyphic Luwian, followed a similar tactic, by introducing the animate **deNsk^{w}ér(-o)-* next to its inherited inanimate **d^{h}égōm* word. If my attempt at the etymology $^{\text{TERRA}}$*taskwara-* is to be accepted, then the Proto-Luwian **deNsk^{w}ér(-o)-* would mean something like *'great field, powerful land'*. This augmented character of the land, could possibly imply a sort of exaltation and even personification of the earth, in contrast to an inanimate earth.

Of course, synchronically Hieroglyphic Luwian uses *taskwara-* with both the animate and inanimate meanings, as we clearly saw in the examples from the SULTANHAN inscription; while *takamī* is used with a slightly different meaning. This could easily be explained, if we assume that after the its introduction into the lexicon, the usage of Proto-Luwian **deNsk^{w}ér(-o)-* increased and was generalized to simply mean *'earth'*. Thus in turn, it replaced the original **d^{h}égōm* word in Hieroglyphic Luwian, (not in Cuneiform Luwian where **d^{h}égōm* > *tiia̯mmi- 'earth'*), forcing the semantic domain of the latter to become more abstract, shifting from *'earth'* to *'land'* perhaps even used to mean *'land/ kingdom'* as we see in the SULTANHAN inscription.

Unfortunately, the above account has no observable effect in Cuneiform Luwian; yet it closely resembles the Hittite situation of the animate compound words vs an inanimate **d^{h}égōm* word, though with much larger consequences for the lexicon. Nonetheless, even though they both serve the same function of expressing a grammatically and arguably semantically animate *'earth'*, the Hittie and Hieroglyphic Luwian compounds are not etymologically related. Therefore, it is impossible to know exactly what kind of word Proto-Anatolian itself used as the animate counterpart of the inanimate **tḗk^{j}am*; the general earth-lexicon though, is more easily identifiable.

So, in retrospect, we are able to paint a picture of the Proto-Anatolian earth-vocabulary, where PA **tḗk^{j}am* was the primary word covering the wide semantic domain of *'earth'.* It could represent both the inanimate earth, a location, land or ground, but also the animate earth as a supernatural entity, a deity; the latter either by use of the ergative case or compounds like Hittite *tagānzepa- 'spirit on*

the earth' or HLuw *task^{w}ara/i-* [taʃːk^{w}ːára/i-] *'great-powerful land'*. Speaking of which, Proto-Anatolian could also talk about the "earth" as something that can be "cut" into plots, divided, perhaps in the sense of dividing farmlan d, and land as property or drawing borders; this would have been the **k^{w}ér(-o)-*. Finally, Proto-Anatolian could also speak of "earth" as a material, clay; this would have been the **h$_2$l̥iH̥ió-* or **h$_2$l̥iHnó-*. Thus Proto-Anatolian seems to have has a variety of lexical items, each denoting a different aspect of the semantic sphere of "earth", and could thus express the tight relationship of the ancient Anatolians to the earth, ranging from the mundane to the divine.

Chapter V

Anatolian *'earth'*

1. Introduction

As a closing remark to our lengthy discussion on the reconstruction of the Proto-Anatolian *$*d^{h}égōm$* paradigm, I wish to return back to the two aims set at the beginning of this thesis: investigate and etymologize the attested Anatolian earth-words and produce a work dedicated to the treatment and understanding of the evolutionary history of Proto-Indo-European *$*d^{h}égōm$* throughout the Anatolian branch. In this last chapter then, I wish to summarize all the results, conclusions and reconstructions my current research has produced and organize them in a slightly different way that has been done above. Instead I of building my reconstructed lexicon from the bottom up as we did during the analysis, Let us now view the development of the Anatolian earth-lexicon, as it would have actually evolved; starting from the ancestor of all Anatolian languages.

2. Proto-Indo-European

Despite the multiple new claims made about Proto-Anatolian herein, I have actually proposed no significant change to the traditionally reconstructed PIE paradigm for *$*d^{h}ég^{h}ōm$*. The only point where my presumed PIE paradigm diverged from the traditional account presented in the Chapter I, is the reconstruction of the PIE stops in accordance to the Glottalic Theory. This is represented in the table below, where I have chosen to use a slightly altered notation and write plain *$*d$* instead of aspirated *$*d^{h}$* and pre-glottalized *$*ʔǵ$* instead of plain *$*ǵ$*. The inclusion of two distinct locatives and the deeper derivation of the endingless one, are small additions that do not affect the original paradigm heavily.

NOMINATIVE	*$*déʔǵōm$*
ACCUSATIVE	*$*déʔǵomm$*
GENITIVE	*$*dʔǵmés$*
DATIVE	*$*dʔǵméi̯$*
I-LOCATIVE	*$*dʔǵémi$*
Ø-LOCATIVE	*$*dʔǵőm$* < *$*dʔǵém$*

Table 17. The Declension of PIE *$*déʔǵōm$*

3. Proto-Anatolian

Entering into the Proto-Anatolian stage the most significant change that the paradigm underwent was the gender-shift from feminine to neuter, due to the regular phonological merge of the PIE direct cases. This development had both syntactical and semantic consequences, as the inanimate neuter noun was on the hand unable to function as a subject to a transitive clause and incapable of expressing the personified aspect of the divine earth. As a response to this, the two primary branches, Hittite and Luwian branches innovate new animate compound terms, of common gender to satisfy both the syntactic and semantic gap. Furthermore, alongside **tḗkʲam* and its unknown animate counterpart, one may find several other words, like **h₂li̯Hi̯ó-* or **h₂li̯Hnó-* meaning *'clay'* as well as **kʷér(-o)-* menaing *'field, plot of land'*. From this point on, though the ancestral Anatolian language begins to branch off.

	PROTO-INDO-EUROPEAN	**PROTO-INDO-ANATOLIAN**
NOMINATIVE	**dʰéǵōm*	**tḗkʲam*
ACCUSATIVE	**dʰéǵomm*	
GENITIVE	**dʰǵmés*	**tkʲmā́s*
DATIVE	**dʰǵméi̯*	**tkʲmḗ*
I-LOCATIVE	**dʰǵémi*	**tkʲémi*
Ø-LOCATIVE	**dʰǵőm < *dʰǵém*	**tkʲā́m*

Table 18. From PIE to PA

3.1. Hittite

Moving down into Hittite, the Proto-Anatolian paradigm is subjected to mostly phonological changes, like word-final **-m* turning into /n/ and the subsequent spread of /n/ from the direct to the oblique cases in place of **m*. Additionally, it appears that Hittite retained the endingless locative, but lost the i-locative.

	PROTO-INDO-EUROPEAN	PROTO-INDO-ANATOLIAN	HITTITE
NOMINATIVE	*dé^{ǀ}ǵōm	*tḗk^{j}am	/tékan/
ACCUSATIVE	*dé^{ǀ}ǵomm		
GENITIVE	*d^{ǀ}ǵmés	*tk^{j}mā́s	/tknā́s/
DATIVE	*d^{ǀ}ǵméi̯	*tk^{j}mḗ	/tknḗ/
I-LOCATIVE	*d^{ǀ}ǵémi	*tk^{j}émi	-
Ø-LOCATIVE	*d^{ǀ}ǵṓm < *d^{ǀ}ǵém	*tk^{j}ā́m	/t(ə)kā́n/

Table 19. From PIE to PA to Hittite

Alongside the inanimate *tēkan*, Hittite also introduced the animate, common-gender *tagānzepa-* fulfilling both a syntactic role, in place of an expected ergative case as the subject in transitive clauses, as well as a semantic role of the personified, earth-deity: the *'spirit on the earth'*. Next to them, Proto-Anatolian **k^{w}ér(-o)-* yields *ku̯era-* retaining its original meaning *'field'; while* Proto-Anatolian **h$_2$li̯Hnó-* also survives with its original meaning unchanged, as *ḫalinā- 'clay'*

3.2. Lydian

In Lydian, all traces of the original PIE **d^{h}égōm* word have entirely disappeared, and no trace of **k^{w}ér(-o)-* is found either. Instead, the only word that does survive is PIE **h$_2$li̯Hi̯ó-* changing into *kλida-* through regular sound-shifts. The meaning of word, however does not evolve as predictably and instead, at the expense of the **d^{h}égōm* word, **h$_2$li̯Hi̯ó-* expands its semantic domain and becomes the primary earth-word.

3.3. Proto-Luwian

Moving down the second Luwian branch, we are faced with a drastically changed paradigm, where any two forms may look unrecognizable side by side, and yet are assumed to have coexisted, in a unstable paradigm. This situation is the expected result of a very regular Luwian sound-law, the "Luwian lenis velar loss", which affects some forms, but not others, depending on the proximity of the velar to the accented vowel. Additionally, Proto-Luwian exhibits the exact reverse

behavior than Hittite when it come to the locative cases, retaining the i-locative but removing the endingless locative.

	PROTO-INDO-EUROPEAN	PROTO-INDO-ANATOLIAN	PROTO-LUWIAN
NOMINATIVE	**dʰéǵōm*	**tḗkʲam*	**tḗʔan*
ACCUSATIVE	**dʰéǵomm*		
GENITIVE	**dʰǵmés*	**tkʲmā́s*	**tkmā́s*
DATIVE	**dʰǵmé̯i*	**tkʲmḯ*	**tkmḯ*
I-LOCATIVE	**dʰǵémi*	**tkʲémi*	**tʔjémmi*
Ø-LOCATIVE	**dʰǵőm < *dʰǵém*	**tkʲā́m*	-

Table 20. From PIE to PA to PL

Alongside the inanimate, neuter **tḗʔan*, Proto-Luwian might have also introduced the animate, common-gender **deNskʷér(-o)-*. This word is not actually inherited into Cuneiform Luwian, but the Hieroglyphic evidence, implies, that the word must have already entered the language by this stage. This compound with a meaning close to *'great, powerfull land'* fulfilled both a syntactic role, in place of an expected ergative case as the subject in transitive clauses, as well as a semantic role of the personified, earth-deity.

3.3.1. Cuneiform Luwian

Directly below Proto-Luwian, we find Cuneiform Luwian, which retains nothing but a single ablaut pattern from the original paradigm, namely the i-locative stem. This in turn, becomes widely generalized giving rise to a new, far more regular paradigm. I have claimed, that it is the immense irregularity of the inherited paradigm in Proto-Luwian was the primary for the simplification in Cuneiform Luwian and the lexical replacement in Hieroglyphic Luwian. Impressive is the fact, that the newly formed noun, is not a neuter like its Proto-Anatolian ancestor, but a common-gender noun, like the PIE word originally was.

	PROTO-INDO-EUROPEAN	PROTO-INDO-ANATOLIAN	PROTO-LUWIAN		C. LUWIAN
NOMINATIVE	*dé^{ʔ}ǵōm	*tḗk^{ʲ}am	*téʔan	*tʔjémmis	/tjámmis/
ACCUSATIVE	*dé^{ʔ}ǵomm			*tʔjémmin	/tjámmin/
GENITIVE	*d^{ʔ}ǵmés	*tk^{ʲ}mā́s	*tkmā́s	-	-
DATIVE	*d^{ʔ}ǵméi̯	*tk^{ʲ}mí̄	*tkmí̄	*tʔjémmi	/tjámmi/
I-LOCATIVE	*d^{ʔ}ǵémi	*tk^{ʲ}émi	*tʔjémmi	-	-
Ø-LOCATIVE	*d^{ʔ}ǵṓm < *d^{ʔ}ǵém	*tk^{ʲ}ā́m	-	-	-

Table 21. From PIE to PA to PL to CL

3.3.2. Hieroglyphic Luwian

From the original **d^{h}égōm* paradigm, Hieroglyphic Luwian seems to have only retained a direct outcome of the PIE dative **d^{ʔ}ǵméi̯* > /tkmí̄/, ambiguously spelled as *ta-ka-mi-i*. This, however, is a hapax legomenon, and it is thus impossible to determine whether it was part of a larger paradigm, or whether it was focalized into the language, after a complete loss of the highly irregular Proto-Luwian paradigm. Furthermore, as it is inherited into Hieroglyphic Luwian, the word undergoes semantic shift, as is evident from its single instance, where is does not seem to mean *'earth'*, as expected, but rather *'land'* in a more abstract sense.

	PROTO-INDO-EUROPEAN	PROTO-INDO-ANATOLIAN	PROTO-LUWIAN	H. LUWIAN
DATIVE	*d^{ʔ}ǵméi̯	*tk^{ʲ}mí̄	*tkmí̄	/tkmí̄/

Table 22. From PIE to PA to PL to HL

The semantics of *'earth'* are thus moved under the Proto-Luwian term **deNsk^{w}ér(-o)-* reflected in the Luwian *taskwa/ira/i-*. In the Proto-Luwian stage this term was used more specifically for the animate aspect of the *'earth'*, but as its usage must have grown, so must have done its semantic field, slowly turning into the primary word for earth in Hieroglyphic Luwian, both animate and inanimate.

4. Conclusion

In conclusion, all the key information and findings have been briefly summarized into a single narrative tracing the Anatolian earth-lexicon from Proto-Indo-European, down to the individual languages. Some more generalized observations regarding the described phenomena would be that: 1) The originally reconstructed paradigm of *d^hégōm for PIE remains virtually unchanged with regards to accentuation and ablaut, however the voiced velar is alternatively reconstructed as unaspirated/ pre-glottalized; 2) The merge of the PIE direct cases and the resulting gender-shift in Proto-Anatolian, strongly determined the evolution of the *d^hégōm words and their interaction with the newly introduced lexical elements, often leading to semantic-shift; though no two languages follow the exact same pattern; 3) Hittite provides us with the most well preserved paradigm, but Cuneiform Luwian completes is by preserving the single instance of a *d^hģém- grade in Anatolian and thus greatly influences the reconstruction of the Proto-Anatolian paradigm; 4) We still lack data from several Anatolian languages like Lycian, Lydian and Palaic, that might help shed some more light onto the history of the Anatolian earth-words and their semantic-shifts; however they most likely will not lead to any significant alterations to the already reconstructed Proto-Anatolian and Proto-Indo-European *d^hégōm paradigms.

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