



The origins of the PIE feminine gender

**Reconsidering the evidence from Proto-Indo-Anatolian
to Proto-Indo-European**

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1 Introduction¹

Most Indo-European branches share a nominal system with three grammatical genders: masculine, feminine and neuter. The exception is the Anatolian branch, where nouns can be either neuter or common gender. The Anatolian neuter by and large corresponds to the neuter of the other Indo-European branches, so that words which are neuter in an Anatolian language are usually so in the rest of the family as well. The Anatolian common gender, however, encompasses both the masculine and feminine category we find in other Indo-European languages; formally it mostly resembles the masculine. A feminine gender is entirely absent.

This discrepancy is one of the most striking differences between Anatolian and the rest of the Indo-European language family, and its significance has been a hotly debated topic for several decades. It is now generally assumed that the feminine gender is an innovation of the Core IE languages, that is to say, of PIE after the split with Anatolian. How exactly such an innovation should have come about, however, is disputed; there is no clear consensus as to the original semantic value of the new gender, its formal characteristics and its subsequent development.

In this thesis, I will give an overview of the most important solutions which have been put forward so far, critically review the accessible material and propose a new scenario to account for the origins of the PIE feminine gender. To do so, I will first discuss the existing literature on the issue in this first chapter. In chapter 2, I will look at the relevant grammatical elements in Proto-Indo-Anatolian, which is our best window into the linguistic situation before the feminine was created; in chapter 3 the same features are examined again, but now for Proto-Indo-European, which is the best reconstructable stage *after* the new gender had emerged. Chapter 4 shortly goes into a few relevant typological questions on genders and suffix development. In chapter 5, finally, I lay out my own analysis of the data and sketch a chronology of developments which could account for the changes we observe between PIA and PIE.

1.1 The feminine gender as a recent development

In theory, there are two possible ways to account for the different gender systems of Anatolian and the other Indo-European languages. Either the common ancestor of Anatolian and the other branches did have a feminine gender, and Anatolian lost it, or the feminine gender did not yet exist when Anatolian left the Indo-European homeland, and the remaining branches developed it before going their separate ways as well. Arguments for both options have been put forward, but the *communis opinio* now favours the latter (see e.g. Matasović (2004: 36-41), Lundquist and Yates (2018: 2094) and Melchert (fthcm.), all with references). I will not attempt to reproduce the entire body of literature on the question, but as the more recent development of the feminine gender is a rather crucial assumption for this thesis, a summary of the underlying rationale is in place here. In the following paragraphs, I will set out the most important arguments and counterarguments which have been advanced in the course of the discussion.

¹ I'm very grateful to Alwin Kloekhorst for all his help and advice and for making this thesis project such an enjoyable and educational experience even during a pandemic. Many thanks also to my dear Bahuvrihi – Laura, Pascale and Vera – for the general moral support and encouragement, and to Wouter for reminding me that it might be healthy to stop thinking about PIE pronouns for a few hours every now and then.

1.1.1 Innovation in Core IE

Even before the decipherment of Hittite, certain features of the then known Indo-European gender system already suggested that the creation of the feminine gender was a relatively recent innovation (e.g. Brugmann 1891). Traces of an earlier, two-way distinction are found in the adjectival, pronominal and nominal inflection.

Most adjectives in the ancient Indo-European languages can be inflected along the same three genders as the noun, i.e. masculine, feminine and neuter. However, we also find adjective classes where the masculine and feminine are not distinguished: that is to say, the same form is used to agree with both masculine and feminine nouns. This occurs most often in athematic adjective classes, such as the third declension in Latin (m./f. *levis*, n. *leve* 'light') and compounded *s*-stems in Greek and Sanskrit, (m./f. εὐμενής, *sumánās*, n. εὐμενές, *sumánas* 'well-disposed'); however, in Greek we also find several thematic simplex adjectives where masculine and feminine are not distinguished, for example m./f. φορός, n. φορόν 'bearing' (Lundquist and Yates 2018: 2096). In some of these Greek cases an innovated feminine form is added to the paradigm in a later stage of the language. This supports the possibility that the Latin and Sanskrit classes cognate to the Greek two-termination adjectives did originally not make a distinction between masculine and feminine either, but created a new feminine adjective independently (Wackernagel 1926 [2009]: 460-3).

A similar lack of feminine forms is seen in the interrogative pronoun **kwi-*. In Greek we find τίς for masculine and feminine, and τί for the neuter; Latin has corresponding m./f. *quis* and n. *quid*. We do find a separate feminine form in some cognate paradigms, e.g. Skt. m. *kás*, f. *ká*, n. *kát/kím*, but these are probably innovations, where the feminine form appears to be taken from the (perhaps adjectival) root variant **kwo-* (Beekes 2011: 230). I will discuss later to what extent this form can be reconstructed for PIE, but in any case it is not original to the paradigm of **kwi-*.

Finally, even in the noun the distinction between masculine and feminine is not entirely clear-cut. Although the descendants of the suffix **(e)h₂* (e.g. Lat. *-a*, Gr. *-η*, Skt. *-ā*) are productive as female reference markers in the daughter languages, we find some *h₂*-stems which denote male individuals, such as Lat. *scriba* 'writer' and Gr. νεανίας 'young man'. Similarly, while *o*-stems are usually masculine, we find some cases which rather refer to women. For example, Gr. νύς, Lat. *nurus* and Skt. *snusā-* 'daughter-in-law' allow us to reconstruct a PIE *o*-stem **snuso-*; the Latin word presumably became an *u*-stem by analogy to *socrus* 'mother-in-law' (De Vaan 2008: s.v.), and the Sanskrit cognate received a secondary feminine suffix. As the *o*-stem of Greek is the only reflex which cannot be explained as a later innovation, this is the form we must reconstruct for PIE. Other examples are found mostly in Greek: words such as ἵππος 'horse' and αἰδοῦς 'singer' can denote both male and female referents when combined with respectively the male and female article, e.g. ἡ ἵππος 'the mare' (LSJ: s.v.).

To summarise, the distinction between masculine and feminine is incomplete throughout the nominal system, especially in the oldest stages of the attested IE languages. This suggests that this distinction as a whole is a relatively recent innovation in these languages.

1.1.2 Loss in Anatolian

Despite this, it has also been argued that the feminine gender was created *before* Anatolian split off, and that Anatolian subsequently lost its third gender again.

Melchert (1992) refers to the occurrence of the traditionally feminine suffix **-eh₂-* in Anatolian. In Lycian, this suffix derives nouns such as *χupa*-‘tomb’ and *arawa*- ‘freedom’; moreover, it occurs in the suffix *-aza-* (< **-tjeh₂*), which is used to build names for professions such as *wasaza*- ‘priest’. In Hittite the suffix is found in e.g. *ḫāššā*- ‘fireplace’ and *ḫišša*- ‘hitch-pole’. On the basis of these forms, Melchert argues that the feminine must have existed in Anatolian, and that its suffix was retained in these forms even though the gender was otherwise lost.

Importantly, however, **-eh₂* has no feminine meaning in any Anatolian language. Although we find some cases with female referents, such as Lyc. *lada*- ‘wife’ and *χñna*- ‘grandmother’, the majority of the forms denotes male professions or inanimate concepts. Indeed, other suffixes are used for feminine reference meaning in Anatolian, such as *-ššara* < PIE **-sor* (Hoffner and Melchert 2008: 59). Moreover, even if **-eh₂* had carried feminine semantics, this would not have been enough to constitute an inherited third gender in Anatolian. Many languages without a feminine gender still have motion suffixes, such as English with e.g. *-ess*: what distinguishes a grammatical gender is not lexical meaning, but syntactic agreement on other parts of speech, such as pronouns and adjectives (Corbett 1991: 4-5). The Anatolian forms in **-eh₂* nowhere show such agreement: their adjectives are inflected according to the normal common gender paradigm, and not, as feminine forms in the other Indo-European branches, to their own, separate paradigm.

Another feature of Anatolian which has been assumed to reflect a trace of the feminine is the so-called *i*-mutation in Luwian and Lycian: many nouns and adjectives in these languages receive an *i*-suffix in the common gender nominative and accusative. It has been suggested that this suffix may be a relic of PIE **-ih₂*, another suffix which derives feminine nouns and adjectives (Oettinger 1987; Melchert 1994). However, later research has come to the conclusion that *i*-mutation is a secondary development in Anatolian (e.g. Rieken 2005); as such, it cannot be interpreted as a relic of feminine agreement.

The **-ih₂* suffix may be found in another context in Anatolian, namely in personal names. In texts from Kaniš, we find female names in *-ašue*, next to male names in *-ašu*; the final *-e* therefore seems to be a feminine marker. Kloekhorst (2019: 223-30) argues that this *-e* goes back to **-ih₂*, with regular lowering of a high vowel before a laryngeal. However, the suffix is found only on nouns – that is to say, personal names – and not on agreeing adjectives or pronouns. It should therefore not be regarded as a gender marker, but simply as a motion suffix to derive nouns referring to females. This is an interesting conclusion, as it suggests **-ih₂* had already acquired feminine semantics when Anatolian split off; however, it can again not be considered evidence in favour of an Anatolian feminine gender.

It must also be noted that we do not find any other positive evidence in favour of a lost feminine gender in Anatolian. As Matasović (2004: 39) argues, even when a gender disappears from a language, traces are usually retained. For example, although English no longer distinguishes gender in the adjective, we still find the original tripartite distinction in the pronominal system,

where we have *he, she* and *it*. Such remnants cannot be found in the pronouns of the Anatolian languages, where we have e.g. Hittite c. *kāš*, n. *kī* in the demonstrative pronoun.

The absence of any evidence of a feminine gender in Anatolian renders explanations for its hypothetical loss quite meaningless. For example, Watkins (2008: 14-5) claims that the feminine could have disappeared because the endings of the masculine and feminine nominative merged phonologically as a consequence of regular sound laws and analogical processes: in Hittite, m. **-os* regularly gave **-aš*, whereas f. **-eh₂* gave **-a*, which was augmented with an analogical nominative ending *-š*. As a result, the distinction between the two genders would have been lost. However, although this merger did indeed take place in Hittite, it did not occur throughout the entire Anatolian branch: in Lycian **-os* and **-eh₂* yield respectively *-e* and *-a* (Fortson 2009: 273). The scenario would therefore only be viable for Hittite, and not for Lycian – which however still has no feminine gender. Moreover, Watkins only shows that it is *possible* that the feminine would have become less recognisable through the history of the language. He does not prove that there was a third gender before this merger took place: as Lycian, with its maintained distinction, still has only two genders, it is more likely that there wasn't.

1.1.3 A post-Anatolian innovation

We can conclude that there is no convincing reason to assume Anatolian knew a feminine at any earlier stage of its development, while there are several good reasons to regard the feminine gender as a later innovation in the rest of the Indo-European branches. The most economic conclusion is therefore that Anatolian had left the Indo-European homeland before the feminine gender came into being. This is indeed now the majority view; see for an overview e.g. Matasović (2004), Lundquist and Yates (2018: 2094-9) and Melchert (fthcm.), with references.²

This does not mean that the suffixes later associated with the feminine did not yet exist in Anatolian. They were present already, but they did not show agreement and did not always have feminine semantics. In chapter 2 we will see what functions they had instead in Anatolian and PIA.

² Despite this general consensus, some scholars still believe that Anatolian may as a matter of fact have had – and lost – a feminine gender. For example, Eichner (2015) argues that the Hittite numeral **šija-* 'one' is a cognate to the Greek feminine form ἓνα 'one', and that since their preform **sih₂-* (from **smih₂-*, Gr. μία) was formed as a feminine to **sem-* 'one' (Gr. εἷς), the existence of the form in Hittite must be evidence of the existence of a feminine gender in the branch. However, the connection between **sih₂-* and **sem-* is far from certain, as will be discussed in paragraph 3.1.3. Adiego (2016) states that the lack of agreement for Lycian nouns in *-a < *-eh₂* may be seen not as an argument against a feminine gender but "rather as the situation following the loss of the feminine grammatical gender". He gives the example of English, which also has semantically feminine forms but no agreement, and which indeed lost its feminine gender. What he seems to forget, however, is that English also shows many other traces of its lost gender, such as the three-partite distinction in the pronominal system, which we do not see anywhere in Lycian. As it stands now, I therefore remain unconvinced by these arguments; in agreement with the majority view, I think a post-Anatolian development of the feminine gender best suits the data as we have them.

1.2 The development of the feminine gender

If we assume that Core IE developed a feminine gender marked by **-eh₂* and **-ih₂* after the Anatolians had left the family, the obvious next question to ask is: how and why did this new gender arise? This question can be divided into two more specific questions. Firstly, how did the relevant suffixes acquire the female reference meaning they show in later Indo-European languages? And secondly, why did a new gender arise around these suffixes; that is to say, why did forms derived with **-eh₂* and **-ih₂* trigger grammatical agreement in adjectives and pronouns? These two developments may well have influenced each other, and the answers to both questions may be intertwined to an extent; nonetheless, it is important to keep in mind that an account of the development of the PIE feminine needs to satisfactorily address both points.

1.2.1 Feminine semantics

Much has been written especially about the semantic development of **-eh₂*, which is often considered the ‘main’ feminine suffix.³ As we saw above, it has fulfilled various other functions beside marking of female referents: we find forms in which it denotes abstract concepts and (often male) individuals. Another use of **-eh₂*, which I have not yet discussed, is its collective meaning. In Anatolian, we see this use in examples such as *alpaš* ‘cloud’, *alpēš* ‘clouds’, *alpa* ‘cloud-bank’. In other Indo-European languages, some petrified remnants can still be found, e.g. Gr. κύκλος ‘wheel’, κύκλοι ‘wheels’, κύκλα ‘set of wheels’. The collective has later developed into a count plural; in this capacity, the suffix is underlying the ending of the nom.-acc. n. pl. seen in e.g. Lat. *-a*, Gr. *-α* (Clackson 2007: 101-2).

So how did these functions – or one of these functions – evolve into a marker of the feminine? One popular theory is that the collective meaning of **-eh₂* is the source of its later female reference semantics (e.g. Brugmann 1897, Tichy 1993, Litscher 2004). Brugmann suggests that **g^wenh₂-* ‘woman’ was originally a collective derived from an unattested root for ‘to give birth’, and according to Tichy, **h₁uid^heueh₂-* ‘widow’ would originally have referred to all the bereaved next of kin. The reinterpretation of these collectives as females individual would have caused the entire suffix **-eh₂* to be reanalysed as feminine. Luraghi (2009a) suggests a similar scenario starting from the abstract meaning of **-eh₂*, as the change from abstract to individual is typologically well-attested (as in e.g. NHG *Bedienung* ‘waiter’ < ‘service’). For both possibilities, however, we have very few examples: the semantic change of the suffix would have been based on one or two cases. This is typologically unlikely, as semantic change in individual forms usually doesn’t lead to semantic change in their suffixes; for example, NHG *-ung* is still an abstract suffix, not an individual suffix, despite the reanalysis of *Bedienung* as an individual form (Fellner 2014: 12).

Some scholars (e.g. Melchert 2014: 265) have also suggested that the individual semantics of **-eh₂* were the basis for its feminine meaning. From denoting both male and female individuals, the suffix would have narrowed down to only female referents. Here the problem is that we lack a

³ Some even consider **-eh₂* the only feminine suffix, and assume **-i(e)h₂* is an extended variant; see e.g. Melchert (2014: 265), Hackstein (2011) and Stempel (2008: 181). In paragraph 3.3.4 I will discuss the possible relationship between both suffixes in more detail; for now I will treat them separately, as they have different functions in both PIA and PIE.

motivation for such narrowing: as the majority of derivatives in **-eh₂* were semantically male, it is unclear why speakers would focus on the more exceptional feminine meaning.

A rather different route to semantic change may be seen in Fellner's (2014) more systematic motivation for the emergence of **-ih₂* as a feminine suffix. According to Fellner, the contrast between forms such as **deǵu-o-* 'god' and **deǵu-ih₂-* 'heavenly' was interpreted by speakers as a contrast of masculine vs. feminine, which then became productive. In this way, the new meaning of the suffix is not based on some accidental cases, but rather on a systematic pattern occurring in the language due to existing derivational processes. Although we may not be able to posit an identical analogical process for **-eh₂*, its contrast with e.g. the masculine *o*-stems is an interesting factor to take into account, especially since the suffix **-eh₂* appears to replace the thematic vowel in nouns (see chapter 3). As we see, the role played by the rest of the nominal system must be taken into account as well when we try to explain the feminine semantics of the suffix.

1.2.2 Agreement on the adjective and pronoun

The background of the nominal system is of course even more important when explaining the spread of a feminine marker to the agreeing adjective and pronoun. Quite some different theories have attempted to explain the emergence of the PIE agreement with especially **-eh₂*. Again, the developments around **-ih₂* have received less attention; I will look into these in chapter 5.

Most scholars emphasise the role of the pronoun in the spread of agreement, after Greenberg's 1978 article which describes how new genders or noun classes typically acquire agreement in the pronoun first. Tichy (1993) assumes that the collective demonstrative **teh₂*, combined with the new feminine nouns in **-eh₂*, led to the analogical spread of the suffix to other parts of speech. However, in Tichy's account the suffix was still derivational at this point; Litscher (2004) and Luraghi (2009a) note that agreement with derivational suffixes occurs nowhere else in the IE family, and is therefore typologically unlikely. Moreover, we must keep in mind that the demonstrative used for the feminine nom. sg. was not **teh₂* at all, but **seh₂* (Gr. ἡ, Skt. *sā́*, Got. *so*). As this form looks like **so* with the suffix **-eh₂* added to it, it cannot automatically be assumed that it existed before the spread of **-eh₂*; it may also have been created analogically to **so* because of that spread, in which case it cannot have been the starting point.

Entirely different origins for an agreeing demonstrative have also been suggested. For example, Shields (1995) reconstructs a particle **a*, which was added to the masculine (then common gender) pronoun **so* because **so* was weakening in deictic force: the resulting **sa* looked like the suffix of nouns denoting "a natural female reference" and was therefore interpreted as a deictic demonstrative agreeing with these nouns. There are some problems with this scenario, unfortunately: not only is the existence of a particle **a* debatable (Ledo-Lemos 2003: 117), but as we saw before, the number of old **-eh₂* stems denoting females is actually rather small. It is therefore unclear why this new class would have been interpreted as a feminine category. Martinet (1957) suggests that the demonstrative adopted the **-eh₂* from **g^wenh₂-* and similar nouns to better show its agreement with these nouns; however, this explains nothing, as it is entirely unclear why the speakers of PIE would specifically want to create such agreement for **g^wenh₂-* and not for other nouns. Meillet (1931) also thinks that agreement in the pronoun was

the source for agreement in the feminine gender, but he does not further elaborate on the origins of his reconstructed feminine demonstrative **sa*.

A few studies have focussed on the adjective rather than the pronoun in their explanation of the spread of **-eh₂*. Fodor (1957) suggests the feminine was created through “rhyming congruence” between adjective and noun; however, Brosman (1982: 155-6) objects that there is no evidence that rhyme played any part in the creation of agreement in PIE, or for that matter in any other language. Luraghi (2014) proposes that agreement may actually arise through derivative affixes which spread to adjectives, thereby apparently contradicting the statements in her 2009 article. She gives examples from Latin and Italian, which can show diminution on both nouns and adjectives, e.g. It. *Spero che prenda un votino un pochino discretino* ‘I hope s/he’ll get a slightly (dim.) decent (dim.) note (dim.)’.

An entirely different suggestion comes from Harðarson (2014), who assumes, based on the reconstructed feminine numerals **tīsr-* ‘three’ (Skt. *tīsrás*, OIr. *téoir*) and **kwetesr-* ‘four’ (Skt. *cátasras*, OIr. *cethéoir*), that feminine agreement was originally expressed with the suffix **-sor*, perhaps descending from an original substantive **sor-* ‘woman’. This element must be old, as we also find it in the Hittite motion suffix *-ššara*, but that does not necessarily mean that the apparent agreement with the numerals is old as well; other explanations, such as compounding in the numerals, have also been suggested (e.g. Oettinger 1986: 216).

Clearly, to understand the spread of feminine agreement, we must again keep in mind what the nominal system of PIE looked like prior to that spread: for example, what pronouns did exist, and to what extent did we already find the suffixes **-eh₂* and **-ih₂* in the adjectival system? Without a clear idea of these factors, we can hardly assess how realistic the different theories are.

1.2.3 Chronology of developments

From these two aspects of the development of the feminine gender – semantics and agreement – we can derive a third question: what was the order in which these two developments took place? Did **-eh₂* become a feminine suffix first, after which it was interpreted as the marker of a gender? Or was a third gender created first, for another, older meaning of the suffix, which was subsequently reinterpreted as a female reference marker?

Although not all theories are equally explicit on this point, the general assumption appears to be the first. Tichy (1993) and Litscher (2004) argue that collectives were first interpreted as feminine, and that agreement arose later. Similarly, Shields (1995) assumes that agreement became systematic because the pronoun was associated with feminine forms; in other words, the feminine semantics were established before the suffix triggered agreement.

Luraghi (2009a), on the other hand, suggests another order of development. Since the pre-feminine nominal system of PIE appears to have been categorised mainly as animate vs. inanimate (Matasović 2004), she proposes that nouns in **-eh₂* may have been perceived as an intermediate group on the scale of ‘animateness’: concepts such as ‘knowledge’ and ‘faith’ are not animate, but they can be the grammatical subject of a sentence more easily than words for e.g. ‘stone’ or ‘yoke’. According to Luraghi, these abstracts therefore share the agency of the animate nouns, but also

the lack of intentionality which characterises the neuter inanimates. For that reason, they may have developed into a third gender, which was subsequently reanalysed as feminine. Unfortunately, she is somewhat vague on the mechanics of this later reinterpretation: in her paper from 2011, she argues that a split of the animate gender typologically always leads to a distinction between feminine and masculine, or in other words: “the sex parameter offered the only possible motivation for a third gender within a gender system such as that of early PIE” (Luraghi 2011: 456). However, that would raise the question why a non-sex-based third gender would have arisen at all, even if it was reinterpreted later.

Matasović (2004) offers an elaborate study on the semantics and typology of the feminine gender in PIE; however, he is remarkably unclear on the exact development he envisages for the gender. First he sets out a scenario in which the pronouns **so*, **to* and **teh₂* led to the analogical creation of **seh₂*, which he argues agreed with singulative forms of earlier collectives with a more abstract meaning (p.166). However, mere pages later, he suggests that the new agreement pattern was first introduced with **g^wenh₂-*, so **seh₂* instead of **so*, and spread to other female words and neuter abstracts from there on (p.175). It is therefore unclear whether he thinks the new agreement class was first created on an abstract semantic basis, or that the feminine meaning of **-eh₂* had already arisen by the time **seh₂* was created.

The chronology of the different developments is nonetheless of rather essential importance for a realistic account of the rise of the feminine gender. For the creation of both feminine semantics and agreement, the nominal system as a whole determines what can and cannot be posited as a realistic development: grammatical changes do not occur in a vacuum, and every change we reconstruct should be a well-motivated innovation within the existing system. Since a different order of developments means that every change is taking place against a different background, we should not consider the different steps in the creation of the feminine gender as separate developments: they did probably influence each other to an extent, and we should therefore study them together.

1.3 Research outline

In this thesis, I will combine semantic and grammatical aspects in order to describe how and why the feminine gender emerged. In doing so, I will focus on the period between the split with Anatolian and the dispersal of the other Indo-European languages. In other words, the Indo-Anatolian system will be taken as the starting point, and the last reconstructable common stage of the other IE languages as the end point. I will not elaborate much on the period before the split of Indo-Anatolian; if a suffix already shows certain functions in the Anatolian languages, I will take these as a given without trying to reconstruct them all back to one ‘proto-meaning’. After all, the existence of these multiple meanings *before* the existence of the feminine gender means that these different meanings were around when the feminine was created, which is the only relevant point for the objectives of this study. We can therefore examine the PIA data at face value.

2 Starting point: the situation in Proto-Indo-Anatolian

The linguistic stage we can reconstruct for Proto-Indo-Anatolian is our best approximation of the background against which the feminine gender developed. In this chapter I will give an overview of the Anatolian gender system and discuss the functions of **-eh₂*, **-ih₂* and **-sor*, the three suffixes which have been assumed to play a role in the later development of the feminine gender.

2.1 Gender in Proto-Indo-Anatolian

The Anatolian languages, as described above, have two genders, usually labelled common and neuter.⁴ These genders differ only in the nominative, which has its own ending in the common gender and is identical to the accusative in the neuter. In all other cases, their endings are identical.

The semantic division between these two genders is often characterised as animate vs. inanimate (e.g. Watkins 2008: 14; Oettinger 2017: 256). However, upon closer inspection, it turns out this is not entirely accurate. It is indeed the case that neuter nouns always denote inanimate referents,⁵ but the common gender is all but exclusively animate: we find quite a number of inanimate nouns in this category as well, e.g. *ḫaštera-* ‘star’, *keššar* ‘hand’ and *ḫapa-* ‘river’. Many inanimate semantic categories appear in both the common and the neuter gender, such as body parts, tools and abstract nouns (Zeilfelder 2001: 157-8). Admittedly, it is not a requirement for a gender distribution rule to explain every single case in the lexicon: as Corbett (1991: 13) observes, in virtually every gender system there is a “semantic residue” of exceptions. However, the number of inanimate nouns in the Anatolian common gender is far greater than one would expect from a mere residue. It therefore appears that there is more than animacy to the semantic organisation of the Anatolian gender system.

The question is then: is that also the case for the gender system of Proto-Indo-Anatolian, or did Anatolian somehow confuse its gender distribution over the course of its development? As shown by Matasović (2004: 199-202), other IE languages show a very similar picture. Inanimate words denoting objects or abstract concepts are frequently masculine or feminine, rather than neuter: examples are m. **h₂eḱ-mon-* ‘stone’, **suepno-* ‘sleep’, f. **neh₂u-* ‘boat’, **nokwt-* ‘night’. The only semantic category which is consistently neuter is that of the substances and fluids, e.g. **h₁esh₂r-* ‘blood’, **h₃esth₁-* ‘bone’ and **melit-* ‘honey’. This is true for Anatolian too; for example, the Hittite descendants *ēšḫar* ‘blood’, *ḫašti-* ‘bone’ and *militt-* ‘honey’ are indeed neuter.

Based on this observation, Matasović argues that the gender assignment in the earliest stage of the protolanguage did not depend on animacy, or at least not on animacy alone. Instead, following

⁴ According to some classifications, categories from an agreement system which is not divided by sex should be called noun classes rather than genders (e.g. Unterbeck 2000: xviii, xxvi). However, since the two terms are usually used interchangeably (Aikhenvald 2004: 1031) and gender is the usual term used in literature on PIA and PIE, I will keep to this tradition even for the early, non-sex-based stages of the language.

⁵ According to Matasović (2004: 33) we find a small number of animate neuters as exceptions to this rule. However, these cases are inanimate mass nouns in origin: Hitt. *šupp(a)-* means ‘cattle’ rather than ‘animal’, and *ḫardu-*, which Matasović translates as ‘great-great-grandchild (?)’ is translated in Kloekhorst (2008) as a less individuated ‘brood, descendance’. I think we can therefore maintain the general rule that neuters are inanimate.

Ostrowski (1985), he suggests the distinction may go back to an original distinction between count and mass nouns (Matasović 2004: 211). Of course, these two factors are not entirely independent from each other: as Comrie (1989: 189) shows, words for individuals, which stand higher on the animacy scale, are generally countable, “while entities of lower animacy are more readily perceived as an indeterminate mass”. In other words, higher individuation tends to correlate with higher animacy. Nonetheless, as we will see later on, the factor of individuation will be a helpful addition in describing the gender system of Core IE too.

2.1.1 A Lycian third gender?

As discussed in the previous chapter, it is by far the most likely option that Anatolian did not inherit a third gender; that is to say, that PIA knew only the two genders described above. However, a possible Anatolian innovation on this point should shortly be mentioned here for the sake of completeness.

In Lycian we find a few cases of what looks like feminine agreement in the *e*-stem adjectives, which descend from PIA *o*-stem adjectives. Melchert (1992: 48 fn. 16) cites three cases. In TL 80,3 we find the word *erijupama* connected to the goddess Malija; the epithet probably means ‘exalted’ and is interpreted by Melchert as a feminine form of a participle in *-ami-*. Secondly, in the inscription *ebe χupa me tibeija* ‘this tomb is Tibeian’ (TL 100), the word *tibeija* can be interpreted as a relational adjective in **-i̇jo-* with an ending *-a* that appears to agree with the *a*-stem *χupa* ‘tomb’. The same word *χupa* is found in TL 18, where another relational adjective, *apñχahbija*, again has an *a*-suffix in apparent agreement. To be clear, there is no full-fledged third gender in Lycian, nor do we have reasons to think that these marginal cases are remnants of an earlier three-gender system. Can we then conclude, from these three examples, that Lycian had begun to develop a third gender at the time of their attestations?

Hajnal (1994: 163) prefers to explain these cases in another way. According to him, the epithet for Malija received an *-a* to derive a substantive from a participle, a strategy also seen in e.g. *lāta-* ‘dead person’, which is derived from a participle **/laⁿt(i)-/* from *la-* ‘to die’. *Erijupama* ‘the exalted’ then stands in apposition to the name *Malija*, rather than being an adjective. For *tibeija* and *apñχahbija*, Hajnal argues that these more marked forms replaced the original nominative adjectives in *-i*, which due to *i*-motion and loss of final consonants had come to look identical to the dative and accusative. He supposes the ending *-ija-* arose in substantivized plurals of forms in **-i̇jo-*, which were originally pluralia tantum such as *marazija-* ‘law court’. These could be reinterpreted as singular in some cases, e.g. *qlija-* ‘sheltered terrain’. According to Hajnal, we can conclude that *-ija-* also had a singular meaning, and that it can therefore agree with *χupa*: TL 100 should then more accurately be translated as “dieses Grab ist ein zu Tibe Gehöriges”.

With this explanation of these last two forms, however, we again run into the complication seen before: the fact that some words in *-ija* were reinterpreted as singulars does not automatically mean that the suffix itself had also become productive as a singular suffix. Arguing that it had based on these examples is of course rather circular. We therefore have a situation where both possible explanations require unproven assumptions: we need either a newly arisen feminine agreement pattern, or a singular reinterpretation, both of which are not found anywhere else in

the corpus as far as I am aware. Under these circumstances, we cannot convincingly prove or disprove either of them.

The matter may still be relevant for this thesis, however. It is interesting that these agreement-like constructions are found exactly with the ending *-a* that is cognate to the primary feminine marker in all other IE languages. This either shows that the suffix was somehow a logical candidate for a third gender within the existing system, or that the presence of the suffix elsewhere in the system could lead to situations suspiciously resembling agreement, which may play a part in the rise of actual grammatical agreement. In my opinion, this parallel therefore diminishes the likelihood that **-eh₂* ‘accidentally’ became an feminine gender marker where any suffix would have sufficed, as has been suggested in some explanations (e.g. Melchert 2014). The Lycian use of *-a* suggests that the development of specifically **-eh₂* as an agreement-triggering gender marker was at least supported by some underlying characteristics of the nominal system.

2.2 **-eh₂* in Proto-Indo-Anatolian

But what were these characteristics? As Melchert (2014: 259) states: “Development of the feminine grammatical gender is an innovation of Core Indo-European. However, all three eventual “motion” suffixes were almost certainly present in Anatolian in other functions.” In order to describe how these suffixes came to be relevant for the newly created gender, we have to know first what role they played in the nominal system before the feminine gender arose.

The most hotly debated is **-eh₂*, which would eventually become the primary marker of the feminine gender in Core IE. Already in Proto-Indo-Anatolian, this suffix fulfilled several other functions, nearly all of which have been brought forward in the literature as a possible starting point for reinterpretation to female reference.

2.2.1 Collective

As discussed in the first chapter, the collective in **-eh₂* has often been connected to the feminine gender. To evaluate the merits of such a connection, we must first know what role exactly the collective played in the protolanguage.

As is generally known, the neuter plural has an ending **-eh₂* throughout the Indo-European language family. Eichner (1985), however, argues that this ending can also be seen with collective semantics in some common gender nouns in Anatolian, e.g. in *alpa* ‘cloudbank’ versus *alpěš* ‘clouds’. He therefore suggests that PIA may have known a fourfold number distinction of singular, dual, plural and collective for animate nouns, whereas the neuter only had a collective and lacked a ‘normal’ count plural.

Harðarson (1987: 83ff) and Tichy (1993: 7) reject this suggestion: according to them, plurals in *-a* to animate nouns are a marginal category that does not give reason to reconstruct the collective as a number which was once fully integrated into the paradigm of the common gender. Melchert (2000), however, gives some twenty more examples of common gender collectives in Hittite, e.g. *Gulšeš*, ‘the Fates’, opposed to *gul(a)šša*, ‘(personal) fate’. It must be noted that for several of these

examples, the translations are unsure or even unknown; in these cases we can only see that a word could form two different plurals. This can still support the existence of a second plural formation, but does of course not give any information on the semantics of these two options. For additional support, Melchert also cites some examples from other Anatolian languages, such as Lycian *uwa* ‘cattle’ to *wawa-/uwa-* ‘cow’. Based on these data, he concludes that the collective plural was productive for all genders in at least Proto-Anatolian.

Since Melchert’s article, the notion of a common gender collective in **-a* appears to be quite commonly accepted.⁶ It is still debated, however, whether this collective was a plural form, or rather a true ‘collective’ singular. Harðarson, Tichy and Matasović assume the latter for the neuter collective, based on the fact that it takes singular verbal agreement in Greek, Indo-Iranian and Anatolian; collectives would then have been interpreted as feminine singulars according to their theories. Melchert (2011), on the other hand, supposes the collective was originally a “set plural”, that is to say, a plural which still distinguishes its separate components, but stresses the fact that they belong to one group. He cites the fact that in Old Hittite plurals in *-a* consistently agree with plural predicates, whereas these predicates only become singular in later Hittite (Van den Hout 2001). Moreover, forms such as Gr. κύκλα ‘wheels’ can according to him not be truly collective, as “the wheels of the vehicle remain distinct” (Melchert 2014: 297 fn.2). The singular verbal agreement would not be a valid counterargument, as we also find non-neuter plural subjects with singular verbs (the so-called Pindaric schema).

However, some objections can be made to these arguments. Firstly, as noted by Teffeteller (2020: 410) we should keep in mind that the plural predicates found in Old Hittite by Van den Hout are all inflected with the nominal ending *-a*; that is to say: they agree with collective nouns by taking the same collective ending. We now call these predicates ‘neuter plural’ because they became so in later stages of the language, but all we can state for certain is, in Teffeteller’s words, “that **-h₂* forms take **-h₂* forms”. If the collective ending *-a* denoted an uncountable mass collective, the adjectives must also have been collective rather than plural. From that light, the fact that Hittite switches to singular predicates in later stages can even be seen as a confirmation of a non-plural meaning for the collective: apparently the predicates in *-a* were no longer fitting when they required more plural semantics.

Melchert’s argument that the singular verb agreement in Hittite, Greek and Indo-Iranian is not diagnostic is also dubious. As set out by Teffeteller, there are several reasons to assume that the singular verb did indeed reflect a non-plural meaning in the minds of speakers. In Greek, for example, the neuter plural *can* also agree with a plural verb, but only if the subject clearly refers to a group of separate objects or persons. For example, as observed by Wackernagel (2009 [1920]: 138), δοῦρα agrees with a singular verb when its meaning is ‘tinder-work’, whereas the verb is plural when the word denotes several individual spears. This suggests that where such plural marking is absent, the subject was apparently not seen as plural.

Moreover, the Pindaric schema that Melchert adduces as a non-neuter parallel is an exceptional construction. From the whole Hittite corpus, Melchert cites five examples (2011, appendix 2); in contrast, the neuter plural effectively always has a singular verb. In Greek, likewise, Chantziara

⁶ Matasović (2004: 145-9) rejects the existence of the common collective, but since he does not mention the Hittite evidence at all, I will discuss his arguments in the chapter on Core IE.

(2000) finds only twenty-three examples of the Pindaric schema, whereas the neuter plural receives a singular verb roughly three quarters of the time. Since such incongruence in number occurs so sporadically in the non-neuter, we can hardly consider this the same phenomenon as the consistent singularity of the neuter plural verbs.

On cases such as κύκλα, Tefeteller notes that the distinctiveness of the separate objects is no reason the form could not be used in a collective sense (p.405). To compare: English *cattle* is a collective even though the individual animals denoted by the form have not physically blurred into one amorphous mass: whether something is seen as a single collective is a matter of perception, not of real-world distinctiveness, and all linguistic signs suggest that forms inflected with **-eh₂* were not considered plural by the speakers of Hittite and other IE languages. Note that this does not necessarily mean that the collective was considered entirely singular either. Similar to English collectives such as *clothing* and *cattle*, the PIA collective may rather have been a noncountable category, which received singular agreement because that was the default option for forms not marked as plural.

For PIA, we can therefore reconstruct a collective which appears to have been largely indifferent to number, denoting a mass or collection of items which were perceived as one, more abstract whole. Going by the Anatolian evidence, this formation could be used for both neuter and common gender nouns. As we saw, there is collective agreement already in Anatolian: the Hitt. nom.-acc. n. adjective gets the ending *-a* < **-eh₂*, and in the pronominal system we find nom.-acc. n. *kue* < **k^wih₂* (Kloekhorst 2008: 489). The development of such agreement must already have been completed in PIA, as we find exactly the same situation in the other Indo-European languages.

2.2.2 Abstract nouns

In Anatolian, the suffix **-eh₂* is also used as a derivative suffix for abstract nouns. We find examples in several Anatolian languages, some derived with only **-eh₂* and others with a combination of **-eh₂* and a second suffix.

In recognising these forms, it is somewhat impractical that Proto-Anatolian **o* and **a* merge to *a* in all Anatolian languages except Lycian, where **o* yields *e* (Fortson 2009: 273). Moreover, original nominatives in **-eh₂* usually receive a secondary nominative ending *-s*, due to the “pan-Anatolian mechanical renewal of asigmatic animate nominative singulars” (Melchert 2014: 262), so that PIE forms in **-os* and **-eh₂* end up looking effectively identical in most attested languages. We can therefore only conclusively determine whether a noun goes back to **-eh₂* if we have cognates in more informative languages, or if the suffix is combined with other suffixes and retains some more of its original shape.

For Hittite *pijetta*- ‘allotment’, the first method applies: this is likely a direct cognate to Lyc. *pijata*- ‘gift’, which shows that we have to reconstruct a pre-form in **-eh₂* (Kloekhorst 2008: s.v. *pitta*-). An example of the latter option is seen in Hitt. *wārra*- ‘help’, which has a cognate in CLuw. *warrahit*- ‘id.’ As Luw. **-aḥ-it* likely goes back to an extended form of **-eh₂* (Eichner 1973: 59-60), their preform is reconstructed by Melchert (2014: 259) as **^uorHeh₂-*, with secondary extension in Luwian. As a part of the same abstract suffix **-aḥit*, **-eh₂* is found throughout the Luwian lexicon, e.g. in *zidāhit*- ‘virility’ from *zita/i*- ‘man’, or *ānnarummāhit* ‘forcefulness’ from *annarumm(i)*-

‘forceful’. In Lycian, the suffix is also quite productive, e.g. in *arawa-* ‘freedom’ (cognate to the Hitt. adj. *arāua-* ‘free’), *χñtawata-* ‘rule, kingship’ and *χttba-* ‘damage’ (Hajnal 1994).

Considering the wide attestation of an abstract meaning throughout the Anatolian family, we can conclude that this function of **-eh₂* goes back to Proto-Anatolian at least. Since we see a similar function of the suffix in other IE languages (e.g. *k^woi-neh₂-* ‘vengeance’ > Gr. ποινή, Av. *kaēnā-*; see the next chapter for more thorough discussion), the most economic assumption is that the abstract meaning of **-eh₂* did already exist in PIA.

2.2.3 Concrete nouns

Beside its abstract function, the suffix also derived nouns with a more concrete meaning. In recognising these forms, we run into the same complications as described above for the abstract nouns in **-eh₂*; again, we must usually rely on cognates or extensions in order to identify the suffix with some certainty.

For Hittite, two cases are usually cited: *hāšša-* ‘hearth’ and *hišša-* ‘hitch-pole’. Both are common gender nouns which have direct cognates in the other IE branches; importantly, in both cases these cognates are feminine. For *hāšša-*, Lat. *āra* and Osc. *AASA-* ‘altar’ allow us to reconstruct PIE **h₂eh₁s-eh₂-*. A cognate for *hišša-* is found in Skt. *iṣā* ‘hitch-pole’, which leads to a reconstruction **h₂ih_{1/3}s-eh₂-*.

Most other clear cases are found in Lycian (sometimes with cognates). For example, we find *ñtata-* ‘chamber’, *χupa-* ‘grave’ (possibly related to Hitt. *hūppa-* ‘heap, pile’), *qla* ‘precinct’ (if from **h₂ul-eh₂-*, related to Gr. αὐλή ‘courtyard, precinct’ < **h₂eu-leh₂-*; Kloekhorst 2009: s.v. *ēhīla-*) and *prñnawa-* ‘grave house’.

As with the abstract nouns, the attestation of this function in several Anatolian languages makes it possible to reconstruct it for Proto-Anatolian. The similarities to *āra*, *iṣā* and αὐλή already show that similar constructions can be found in Core IE too, as discussed more elaborately in chapter 3. Again, we can therefore conclude that concrete nouns in **-eh₂* were a feature of PIA.

2.2.4 Individuals

A final function of **-eh₂* in several Anatolian languages is to derive common gender nouns referring to individual persons. These can be kinship terms for both male and female family members, and terms for (usually male) professions.

Again, Lycian provides most of our examples. Here we find *a*-stems such as *mahana-* ‘god’, the ethnic noun *Tlañna* ‘a Tloan (masc.)’ the title *θurtta-* and a number of kinship terms, such as *kbatra-* ‘daughter’, *χñna* ‘grandmother’ and *χahba* ‘grandchild, descendant’. The form *erijupama* we saw in 2.1.1 may also be an example, if it does indeed mean ‘the exalted’. In some cases, **-eh₂* has been attached secondarily to the stem in Proto-Anatolian; for example, Skt. *duhitár-* and Gr. θυγάτηρ ‘daughter’ show no trace of the suffix, but their cognate *kbatra* shows that it apparently became productive to some extent in Lycian.

As shown by Hajnal (1994), Lycian also has the productive extended suffix $-(a)za < *-t_2eh_2$, which derives professions such as *kumaza* ‘priest’, *asaxlaza* ‘governor’, *wasaza* ‘priest’ and *xddaza* ‘slave’. Somewhat of a semantic outlier is *lataza* ‘dead person’. These forms were originally derived from thematic adjectives in $-ze < *-t_2jo$, but the formation was later used without an underlying adjectival base as well. In Cuneiform Luwian, words derived with the same suffix sometimes develop back into adjectives, such as *urazza-* ‘great’ and *wašhazza-* ‘sacred’; the latter form may be cognate to Lyc. *wasaza* (Sasseville 2014/2015: 108–9). Finally, CLuw. *hutarlā-* ‘slave, servant’ may be a Luwian example of $*-eh_2$ used to denote an individual.

The Anatolian use of $*-eh_2$ for individuals strongly resembles Core IE forms such as Lat. *scriba* ‘scribe’ and Greek forms in $-\tau\acute{\alpha}\varsigma$. For now, we may therefore assume that this function, too, goes back to PIA.

2.2.5 An original meaning for $*-eh_2$

On the basis of the preceding analysis, we end up with a rather broad range of functions for $*-eh_2$ in PIA: it derived abstract, concrete and individual nouns and served as an inflectional marker of a collective plural as well. For this study, diving deeper into the history of this multitude of functions is not strictly necessary: with PIA as our starting point for the development of the feminine gender, it is not very relevant how this starting point came to be in itself. Nonetheless, it is of course helpful to know whether our reconstructed starting point makes some sense from a linguistic point of view. For that reason I believe it is useful to quickly consider how all these meanings of $*-eh_2$ may be related to each other: after all, if there is no realistic way to account for the different semantics of the suffix, we should reconsider how viable the reconstruction is.

The relationship between abstract and collective meanings has been discussed by Wisniewski et al. (2005). Collectives have a more abstract referent than plurals, in the sense that e.g. *wheels* refers to concrete items whereas *assemblage* is a more abstract concept which cannot be pointed out as an individual object. Luraghi (2009a: 7-8) illustrates the connection between collectives and abstracts with the Italian suffix *-istica*, which originally formed abstracts such as *linguistica* ‘linguistics’, but more recently also started to derive forms with the meaning of a collective plural, such as *manualistica* ‘handbooks’. Importantly, nouns derived with this suffix have abstract or collective semantics: individual derivations do not shift in meaning. There is, in other words, a split in the meaning of the suffix: beside its original abstract meaning, it can now also indicate collective plurals on other bases.

Melchert (2014: 260-4) argues that the dual function of exocentric abstracts and endocentric individuals is also paralleled by other suffixes in PIE. As shown by Nussbaum (2004), several suffixes in the IE language family can be used both to form exocentric feminine abstracts and endocentric masculine forms meaning “the X one”. For example, in Anatolian we find both Hitt. *naḫsaratt-* ‘fear’ from $*naḫsar-$ ‘fearful’ and CLuw. *kallaratt-* ‘portentous one, gargantua’ from *kallar-* ‘portentous’. The endocentric forms often develop back into adjectives later. According to Melchert, $*-eh_2$ could show a similar split, so that *wasaza* ‘priest’ would originally have been ‘the sacred one’, etc.; CLuw. *wašhazza-* ‘sacred’ would then be an example of the secondary development to an adjective.

In short, we have parallels for two splits in meaning: between an exocentric abstract suffix and a collective, and between an exocentric and an endocentric suffix. It therefore seems possible that **-eh₂* did indeed fulfil all these different functions in PIA.

2.3 **-ih₂* in Proto-Indo-Anatolian

Another suffix playing an important role for the PIE feminine is **-ih₂* / *-ieh₂*, which occurs in forms such as Skt. *devī* ‘goddess’ < **deiv₂-ih₂*-. This suffix is not well attested in the Anatolian languages; Melchert (2014: 260) even states there is “no demonstrable reflex” in this branch. Nonetheless, some proposals for Anatolian descendants of **-ih₂* have been put forward.

2.3.1 Appurtenance

It is often assumed that **-ih₂* was in origin a suffix which marked possession or appurtenance, the usual example being Gr. *μέλισσα* ‘bee’ < **mélit-ih₂*-, litt. ‘having honey’, from **mélit-* ‘honey’ (Kim 2014: 125). As far as I am aware, clear attestations of this use are unknown in Anatolian.

However, **-ih₂* is sometimes equated with another suffix **-iH*, as found in Skt. *vṛkīḥ* ‘she-wolf’; as opposed to **-ih₂*, **-iH* gets a nominative *-s*, while it does not show ablaut. Balles (2004: 48) and Steer (2014: 348) derive the suffix from the ablauting **-ih₂*. It is generally thought that we find one case of the *vṛkī-*suffix in Anatolian, namely Hitt. *nakkī-* ‘important’, which Widmer (2005) derives from **Hnok-iH-* ‘that which pertains to a burden’ > ‘burdensome’ > ‘heavy, important’. If one agrees with this etymology and with the origin of **-iH* from **-ih₂*, then, in Melchert’s words, “the presence of the former in Anatolian presupposes that of latter” (2014: 260).

This, of course, requires acceptance of the two given assumptions. Both are not self-evident, however. Widmer himself does not assume **-iH* was related to **-ih₂*, for example; he links the suffix to the instrumental ending **-h₁* and therefore reconstructs **-ih₁* for *nakkī-*. More problematically, it is not certain whether *nakkī-* does indeed contain any suffix of the shape **-iH*. As already suggested by Eichner (1991: 382), the form could also go back to a hysterodynamic adjective **(H)nok-ei*, with PIA **ei* raised to Hitt. *ī* after a velar (Eichner 1973: 78); the oblique stem would then have been generalised, replacing an original nom. **(H)nek-i-*. Widmer rejects this explanation (p.201) because HD *i*-stem nouns in Hittite have a nom. sg. in *-ē*, which is obviously different from *nakkī-*. However, there are very few of such *i*-stems – *utnē* ‘land’ is the only secure example – whereas there are far more *i*-stem adjectives with a nom. in *-iš*. It is well possible that *nakkī* originally had a nom. sg. in *-ē*, but that exactly this discrepancy with similar adjectives led to the generalisation of the oblique form, which would diachronically look more regular. It is therefore far from necessary to reconstruct a suffix **-iH* for this form. In my opinion, this means that we have not enough of a basis to assume it occurred anywhere in Anatolian; obviously, it can then not be used as an argument for the existence of an appurtenance suffix **-ih₂* in this branch either.

2.3.2 Feminine

We may however find a glimpse of **-ih₂* elsewhere in Anatolian, as already discussed in the first chapter: in Kanišite Hittite texts, a final *-e* marks the feminine form of names ending in the element *-ašu-*, e.g. *Watniašue*. This *-e* may well go back to **-ih₂* (Kloekhorst 2019: 223-30). If this attestation of the suffix is reliable, it would suggest that its feminine value as we find it in Core IE goes back to PIA. This would also yield us some unexpected support for Kim (2014: 129), who by lack of an “obvious way to motivate the female value of **-ih₂-* within non-Anatolian IE” suggests that these semantics are inherited from PIA despite the absence of Anatolian evidence.

It is of course striking that we do not find **-ih₂* anywhere else in the Anatolian lexicon. However, I think this need not be problematic. As to personal names, the corpus found in Kaniš is the only source of names with a clearly Indo-Anatolian background; in the rest of the Hittite territory, we find mostly Hattic names, which are in any case not expected to continue a PIA feminine suffix. We might still expect to find **-ih₂* as a motion suffix elsewhere in the lexicon, but as will be discussed in paragraph 4.4, it is not uncommon for a naming suffix to be barely present in the rest of the nominal system. Especially with another, more productive suffix *-ššara* around (see the paragraph below), **-ih₂* may have become obsolete early in the history of Anatolian.

Finally, one could object that the female function of the suffix in names may also be derived from an earlier (and unattested) meaning of **-ih₂*, e.g. diminution. As far as I have been able to find, however, suffixes reinterpreted as feminine in the naming system usually also have a feminine meaning in the rest of the lexicon: for example, English *-ette* (productive in names as *Nanette* and *Linette*) is not only used as a diminutive suffix (e.g. *balconette*), but has also been productive as a feminine motion suffix (e.g. *majorette*). I think it is therefore most likely that **-ih₂* did also have feminine semantics outside the naming system, quite possibly already in PIA.

2.4 **sor-* in Proto-Indo-Anatolian

However, instead of **-ih₂*, another suffix derived new feminines in Anatolian: **-sor*. Although it has only left a few traces in Core IE, it is clearly present as a motion suffix in Anatolian languages: we see it reflected in Hittite forms such as *ḫaššuššara-* ‘queen’ from *ḫaššu-* ‘king’ and in Cuneiform Luwian forms such as *nānašri(ya)-* ‘of a sister’, as opposed to *nāni(ya)-* ‘of a brother’. Moreover, it probably appears in CLuw. **ašra/i-* ‘woman’, the existence of which can be assumed on the basis of forms such as *ašrahit-* ‘femininity’. It is debated where the initial vowel comes from in this last word; after a discussion of some alternative options, Harðarson (2014: 38-41) suggests the form is a compound of pronominal **h₁e-* and **sor-*, a comparable construction to Skt. *á-pati-* ‘the present lord, this lord’ to *pati-* ‘lord’. If the Luwian form does indeed contain **sor*, this presents us with an example in which it appears to be a nominal form rather than a suffix.

Most traces in other IE languages suggest that the form was originally a substantive as well. The most widely accepted reflex is found in the word for ‘sister’, **suesor-/suesr-*, which is usually tentatively reconstructed as a compound of **sue-* ‘own’ and **sor-* ‘woman’, so ‘a woman of one’s own group’ (e.g. Fortson 2009: 191). Lat. *uxor* is also sometimes cited, although here we find more disagreement as to the first element. Steinhäuser (1960: 107) proposes that it goes back to **h₁ugh-* (whence also Lat. *voveō* ‘to promise’), creating a compound ‘promised woman’; Ambrosini (1962)

suggests ‘desired woman’, with the root **uk-* found in Skt. *váṣṭi-* ‘to wish’. The problem with both, as pointed out by Normier (1980: 60) is that verbal roots are usually not used in compounds with a passive meaning, as would be the case here. Harðarson (2014: 32-5) arrives at a reconstruction **h₁uks-sor-*, with the root **h₁euk-* found in Skt. *ókas-* ‘house’, thus ‘housewife’.

Apart from these substantives, we find probable traces of **sor* in a more unexpected place, namely the numeral system. In Celtic and Indo-Iranian, the feminine forms of ‘3’ and ‘4’ contain a suffix **-sr-*: Skt. *tisrás* and OIr. *téoir* allow for a reconstruction **tisr-* < **tri-sr-*, and Skt. *cátasras* and OIr. *cethéoir* go back to **k^wetesr-* < **k^wetre-sr-* (Cowgill 1957: 342-5).

So what role did **sor-* have in the nominal system of PIA? Harðarson concludes, based on the numerals, that already in the protolanguage the original substantive **sor-* must have become an motion suffix. More than that, he states: “Die Feminina der besagten Zahlwörter stellen Reste adjektivischer Kongruenzformen dar, die zeigen, dass **-sor/sr-* schon grundsprachlich zum Ausdruck des Genus femininum grammatikalisiert worden war” (p.50). In other words, according to Harðarson feminine agreement did already exist in PIA, except with another suffix. If this were the case, that would be quite relevant for a study on the rise of agreement between PIA and PIE: after all, then we would only need to explain the change to an entirely different suffix rather than the rise of agreement as a general phenomenon.

However, it is far from certain that the feminine numerals are indeed originally inflected forms. It is also often assumed that they go back to compounds meaning ‘three / four women’ (e.g. Oettinger 1986: 216, Hackstein 2010: 58-62, Kim 2014: 130), comparable to e.g. Gr. τριήμερον ‘three days’, Skt. *triyugám* ‘three generations’ and OIr. *triar* ‘three men’ (< **tri-uiHrom-*). Harðarson objects “Es ist jedoch nicht einzusehen, warum die flektierbaren Zahlwörter in solchen Syntagmen unflektiert gewesen sein sollten”, but as seen above, we see exactly the same in other compounds with the numeral 3. Another problem brought up by Harðarson is that the first element has a zero grade for ‘3’, whereas ‘4’ has a full grade. This does indeed require an explanation, but I think the matter can be solved far more easily than by assuming agreement – of which I do not immediately see how it would make the difference more expected. We know that the paradigm of **trejes* contained some zero grade forms (see e.g. Gk. τρεῖς, gen. τριῶν); this was then the ablaut grade selected to form compounds as those seen above. On the other hand, the paradigm of **k^wetuōr* appears to have had a full grade throughout (Gk. τέσσαρες, gen. τεσσάρων). It then makes sense to expect that a full grade would also be the form chosen as the first element for compounds.

Moreover, Harðarson’s hypothesis has its own problems. If there was indeed an agreement system based on a suffix **-sor* in PIA, I would expect to see some more remnants of it. Anatolian would have inherited feminine agreement in this case, which we should expect to leave traces, as discussed in chapter 1. Similarly, in the other IE languages, petrified remains in compounds, pronouns, etc. would be expected. One could argue that all these traces have been replaced by the later feminine suffixes **-eh₂* and **-ih₂*, but then the question remains why two numeral forms would have retained the old suffix despite such a thorough replacement period.

All in all, I think it is far more likely that **-sor* was not an agreement suffix in PIA: the positive evidence can be explained in another way, and the absence of any other clues in this direction is suspicious at least. It is even unclear whether the form already existed as a motion suffix, as there

are no other non-Anatolian data supporting such a function. All cases in Core IE languages, such as **s̥uesor-* ‘sister’, can be explained as compound elements rather than derived feminine forms. After all, if **-sor* was a motion suffix, we would expect the suffixless **s̥ue-* to mean ‘brother’, which is clearly not the case.

On the basis of these observations, I prefer to reconstruct for PIA a substantive **sor-* ‘woman’ which was used in compounds, but had not grammaticalised any further. The development to the motion suffix that we find in Hittite and Luwian would then be an inner Anatolian development. Of course, this leaves the question how speakers of PIA formed feminine words, as we would expect they had some mechanism to express female reference. One possibility is that they applied lexical strategies comparable to e.g. Fin. *nais-lääkäri* ‘woman-doctor’, Lat. *lupus fēmina* ‘she-wolf’ and Eng. *she-wolf* itself. Theoretically it is also possible that older suffixes did exist but left no traces in later languages, but this can of course not be proven or falsified.

2.5 Proto-Indo-Anatolian: a summary

To summarise, we can reconstruct the following feminine-related characteristics for the PIA nominal system:

1. PIA had a two-gender system with a neuter gender (containing mass nouns and some countable inanimate words) and a common gender (containing all animate nouns and a number of inanimates as well). In other words, the gender distribution was based on both animacy and individuation.
2. The suffix **-eh₂* already knew several functions in PIA: it could form collective plurals (which triggered agreement), exocentric abstract and concrete nouns, and endocentric individual nouns. None of these uses appears to have had specifically female reference.
3. The suffix **-ih₂* is badly attested in Anatolian, with the consequence that it is hard to assess its presence in PIA. Nonetheless, its occurrence in the naming system suggests it did have feminine reference semantics.
4. Although **sor-* would become a productive feminine motion suffix in Anatolian, we have no clear reasons to assume it was so in PIA already; we might therefore best reconstruct only a substantive **sor-* ‘woman’.

From this situation, the Core IE system developed that I will describe in the following chapter.

3. End point: Proto-Indo-European

We can only make estimates on the time period that separates the PIA stage described above from the last reconstructable common ancestor of the other Indo-European languages. Oettinger (2013/2014) suggests a period of 800 years; Kloekhorst and Pronk (2019) rather put the time range somewhere between 1000 and 1200 years (with perhaps an earlier departure of Tocharian). In any case, the development period must have been long enough to facilitate for rigorous morphological restructuring: by the time the other IE languages split up, they had developed a new feminine gender with agreement on all categories in the nominal system.

This is not to say that the development of the gender system had ended by the time PIE broke up. In most daughter branches, we see later innovations: for example, the creation of feminine forms for specific nouns, or for pronouns or adjectives which had so far retained the two-way distinction. We should take care not to project these younger developments back to the common stage of PIE. After all, this would create an inaccurate image of the feminine gender in PIE, which could subsequently skew our view on the developments leading to the existence of that gender. So what features can be securely reconstructed for the protolanguage?

3.1 The feminine gender

We can be certain that PIE knew three genders by the time it split into different European and Asian branches, and that these genders could roughly be characterised as masculine, feminine and neuter. This is the system we find shared by all Indo-European daughter branches. Below I will attempt to reconstruct what exactly the gender system – and especially the feminine gender – must have looked like in PIE, discussing both the formal and the semantic characteristics.

3.1.1 The feminine suffixes

The feminine gender of the IE family is characterised by the suffixes **-eh₂* and **-ih₂*, generally reflected in daughter languages as respectively *-ā* and *-ī*. Both can be used as motion suffixes, the first in e.g. Gr. θεά 'goddess' beside θεός 'god', Skt. *ásvā* 'mare' beside *ásva* 'horse' and Lat. *equa* 'mare' beside *equus* 'horse',⁷ the latter in e.g. Skt. *devī* 'goddess' beside *devá* 'god' and Gr. ἱέρεια 'priestess' beside ἱερέυς 'priest'. Moreover, both suffixes are found in the inflection of adjectives. The common reconstruction is that **-eh₂* was used to mark the feminine of thematic adjectives, whereas **-ih₂* occurs with athematic adjectives. Thus we find feminine forms such as Skt. *nānvā*, Gr. *vḗā* 'new' < **neueh₂-* for the respective masculine forms *náva* and *véos* < **neuo-*, but f. *svādvī*, ἡδεῖα 'sweet' < **sueh₂d(e)uih₂-* for m. *svādú*, ἡδύς < **sueh₂du-* and f. *bhárati*, φέρουσα 'carrying' <

⁷ The short nominative *-a* in Latin is a source of much debate. It has been assumed that it reflects an older zero grade nominative in **-h₂*, which would only have been retained in Italic (e.g. Kortlandt 2017: 4). However, Weiss (2009: 232) notes that some Italic forms do show a long *-ā*, such as Osc. *viú* 'road' < **uiiā-* next to Lat. *via* 'id.' The shortening of the final *-a* would then be a Latin innovation; one possibility is that the short form was taken from the vocative.

**b^herontih₂*- for m. *bháran*, φέρων < **b^heront*- (Ringe 2006: 50; Kim 2014: 121).⁸ There are however some signs that this distribution was not always so strict, as I will discuss in paragraph 3.3.4.

It is generally assumed that **-ih₂* was an ablauting suffix, as in Skt. acc. *dévīm* < **-ih₂-m*, gen. *dévyāḥ* < **-je_h2-s*. Some discussion exists as to whether **-eh₂* also showed ablaut. For example, Harðarson (2015) assumes the suffix is ‘mesostatic’ – i.e. always shows full grade on the suffix – when it derived abstracts from *o*-stems, and Weiss (2009: 229) reconstructs a full grade throughout the paradigm for the entire first declension in Latin. Beekes (2011: 200), on the other hand, reconstructs an ablaut between **-eh₂* and **-h₂*; so do e.g. Nussbaum (2014: 275) and Melchert (2014). Without going too deep into the matter, I believe it is most likely that **-eh₂* did indeed show ablaut. Not only is it impossible to explain short vocatives such as Homeric ἵππότα ‘horse-rider’ and the Latin vocative in *-a* from a paradigm in which the suffix always receives a full grade, but there are also lexemes of which the inflection points to ablaut. Beekes (1985: 39) discusses Av. *hizuuā*- ‘tongue’, of which the gen. *hizuuō* must be reconstructed as a zero grade **-uh₂-es*. Kortlandt (2013: 95ff) also reconstructs a hysterodynamic paradigm for some *eh₂*-forms in Tocharian. Since several clues are pointing to ablaut, and since the levelling of paradigms is easier to account for than the rise of random zero grade forms, the most sensible conclusion seems that **-eh₂* was indeed an ablauting suffix. We cannot technically exclude that there were also subtypes of the suffix without ablaut, but I see no good reasons to assume so; levelling of ablaut grades is a well-attested development throughout the IE family, and this can account for the apparent lack of zero grades in some languages without further extra assumptions.

Both **-eh₂* and **-ih₂* share some other formal characteristics. Both replace the original thematic vowel when attached to thematic stems; if a suffix is combined with an athematic form, it is usually placed directly after the stem (Beekes 2011: 220). For example, next to thematic **h₁ek_u-o*- ‘horse’ we have **h₁ek_u-eh₂*- ‘mare’, and the *t*-stem **nepōt* ‘grandson’, oblique stem **nept-*, has a feminine form **neptih₂* reflected in Lat. *neptis*, Skt. *naptī* and OHG *nift*. Neither suffix receives a nominative ending *-s*. Cases where such an ending does occur, such as Lat. *neptis*, are secondary innovations, as shown by cognates like Skt. *naptī*.

Although these suffixes occur in the daughter languages as the usual markers of the feminine, we also find many unmarked words in this gender. Some are old female reference forms, such as **meh₂tr-* ‘mother’ and **d^hugh₂tr-* ‘daughter’. Many others belong to the large category of feminine abstract nouns; these are either root nouns (e.g. **nok^wt-* ‘night’ > Lat. *nox*, OGH *naht*, Skt. *nákt-*) or contain other suffixes. The abstract suffix **-ti*, for example, is always feminine, e.g. **mn-ti*- ‘thought’ > Lat. *mēns* ‘mind’, Skt. *máti* ‘thought’, MoE. *mind*. In general, *i*-stems often belong to the feminine gender, even if they are not abstract in meaning, e.g. **h₃ey-i-* ‘sheep’ > Lat. *ovis*, Skt. *ávi-*.

It is not always easy to determine if forms contained a motion suffix in PIE, because individual innovations in the different branches are quite frequent. Some nouns switch between suffixes; for

⁸ Tocharian has extended the use of **-ih₂* to the thematic adjectives, thereby replacing **-eh₂*. However, according to a recent study by Del Tomba (2020), the Tocharian state of affairs can be derived from the distribution as we find it in other IE languages; I will therefore not treat Tocharian as an indicator of an ‘intermediate’ stage between PIA and PIE, as is done by Kim (2014).

example, Skt. *rājñī* and OIr. *rígain* ‘queen’ point to a reconstruction $*h_2reh_1ǵnih_2$ ⁹, but Lat. *rēgīna* shows a different \bar{a} -stem derivation. Similarly, Skt. *devī* stands beside Lat. *dea* ‘goddess’. In other cases, the feminine suffixes seem to be entirely secondary: for example, although Skt. *ásvā-*, Lith *ašvā* and Lat. *equa* appear to allow for a straightforward reconstruction $*h_1ek_2eh_2-$, Greek still denotes mares with ἡ ἵππος in its early attested stages, suggesting that the feminine motion in the other three branches could be a parallel later innovation.

Such examples bring Clackson (2007: 105) to conclude that “there is no single good example of a feminine $*-eh_2$ or $*-ih_2$ noun preserved across the IE languages”. However, this may be an overly pessimistic presentation of the situation. There are quite some forms in $*-eh_2$ which consistently belong to the feminine gender throughout the language family, e.g. $*tpersneh_2-$ ‘heel’ > Lat. *perna*, Go. *fairzna*, Gr. πτέρνη, Av. *pāšna-* and $*k^woineh_2-$ ‘punishment, vengeance’ > Gr. ποινή, Lith. *káina*, Av. *kaēnā-*; these are usually verbal derivations of the type that we already saw for PIA in the last chapter, with no specifically feminine meaning. Perhaps Clackson means to state that there are no forms with female reference which contain these suffixes. Even that can be nuanced, however, as we have at the very least two feminine nouns in $*-eh_2$ in PIE: $*gwenh_2-$ ‘woman’ and $*h_1uid^heueh_2-$ ‘widow’, which have often been taken as the starting point for a reanalysis of $*-eh_2$ as a female marker.

Nonetheless, Clackson’s statement can be interpreted in one way which makes sense: it is often said that we have no certain example of $*-eh_2$ or $*-ih_2$ used as a *motion* suffix in PIE. As opposed to forms such as *devī* and θεά, $*gwenh_2-$ and $*h_1uid^heueh_2-$ have not been derived from an underlying masculine noun (Lat. *viduus* ‘widower’ is probably a secondary derivation from *vidua* ‘widow’, Beekes 1992). It appears nearly impossible to reconstruct a feminine noun in PIE which corresponds to an original masculine noun. Matasović (2004: 142-4) therefore concludes in his paragraph on feminine motion that there are “serious reasons to doubt that the derivation of feminine nouns was a productive derivational process already in PIE”.

Unfortunately, this suggestions brings in its own problems. The motion processes we see in the different daughter branches are so similar that it is hard to imagine how they could all have arisen independently. Matasović suggests that the feminine derivation was already fully operational in *adjectives* in PIE; that is to say, that $*-eh_2$ and $*-ih_2$ were productively used to form feminine adjectives for nouns belonging to this new gender (even though these nouns were still unmarked). Nouns with female reference would then originally be derived from adjectives, e.g. $*h_2reh_1ǵnih_2-$ ‘belonging to a king’ (Matasović 2004: 143).

However, it should be kept in mind that $*-eh_2$, as opposed to $*-ih_2$, has no attested meaning of appurtenance either in PIA or in later stages of the protolanguage. In other words, whereas we can assume for $*Hrēǵnih_2-$ a semantic shift ‘belonging to a king > wife of the king > queen’, there is no reason to assume $*h_1ek_2eh_2-$ would ever have meant ‘belonging to a horse’, if it was ever an adjective at all. In order to explain the feminine semantics in this type of formation, we therefore

⁹ For reconstruction of the root see Scharfe (1985: 547), who connects OIr. *rí* (and Lat. *rēx*) ‘king’ to Skt. *rājan* ‘id.’ and Gr. ἀρηγών ‘protector’; the root noun in Italic and Celtic would then be secondary, based on the form found in compounds (McCone 1998: 3-4). Note that, if the word for ‘king’ was indeed an *n*-stem in origin, the feminine form is a straightforward suffixed derivative even in Celtic, where the original *n*-stem has disappeared.

have to assume that the suffix denoted some form of female reference. Even if it originated in the adjectival inflection, this means it must effectively have been a motion suffix already.

Moreover, there are a few cases which do quite strongly suggest feminine motion in PIE. The best example is **deiy-ih₂-* 'goddess', which is found in Skt. *devī-* and Lith. *dìeve*. A remnant is also found in Gr. *δῖα* 'belonging to heaven (f.)', which goes back to a zero grade **di̯-ih₂*. Although the form is found in an adjectival paradigm, it was likely a substantive originally, as shown by formulas as *δῖα γυναικῶν* 'goddess among women' (Beekes 2010: s.v. *δῖος*). The difference in generalised ablaut grade between the Sanskrit and Lithuanian forms on the one hand, and the Greek form on the other hand moreover suggests that all forms go back to a period in which ablaut was fully operational, i.e. PIE. I therefore think we can safely reconstruct *deiy-ih₂-* next to the masculine form **deiy-o-* 'god'. The counterargument that Lat. *dea* shows a different suffix is not very strong, as *-a* became quite productive in Latin and sometimes replaced older endings (as in *rēgīna*).

Another option which may be considered for cases such as Skt. *ásvā-* and Lat. *equa* vs. Gr. *ἵππος* is that feminine marking may not have been obligatory in PIE. We see this in modern languages as well: English *actor* and *comedian* can be used to denote both men and women, although it is also possible to use a marked feminine form *actress* or *comedienne*. Perhaps a comparable situation existed in PIE. Especially if the gender of a word could be shown through an agreeing adjective or article too, it is possible that the marked form became obligatory only later and independently in the different daughter languages.

3.1.2 Feminine agreement in the adjective

This, of course, is only possible under the assumption that the adjective and pronoun did indeed agree with feminine nouns. We can safely assume that this was to some extent the case: again, the development of agreement is too non-trivial to have occurred independently in every single daughter branch. As discussed in the first chapter, however, there are clues suggesting that the development of agreement in the adjective had not yet spread throughout the system when PIE split up. In several daughter branches we find adjective paradigms which still use the same form to agree with both masculine and feminine nouns.

This situation is most frequently found in athematic consonant declensions. In Latin, most third declension adjectives have only one form for masculine and feminine, e.g. *levis* 'light' and *fortis* 'strong'. The same is true for some athematic adjectives in Greek, e.g. *ψευδής* 'false' and comparative forms such as *μείζων* 'larger'. Compounded s-stems show no distinct feminine in both Greek and Sanskrit, e.g. *εὐμενής*, *sumánās* 'well-disposed' (Lundquist and Yates 2018: 2096).

Interestingly, in Greek we also find some *thematic* two-termination adjectives, such as *φορός* 'bearing'. Compounded *o*-stem adjectives do usually not distinguish between masculine and feminine either, e.g. *ἄδικος* 'unjust' and *πρωτοτόκος* 'having a first-born'. Kastner (1967) argues that these cases are generally old, and that they have been retained in specific circumstances (e.g. when an abstract in **-eh₂* was also derived from the same root, so that a new feminine would be identical to this existing form).

The situation described above creates a similar problem to what we saw in the previous paragraph. In general, we can assume that feminine forms were usually not lost in daughter languages, because the trend was to create *new* feminine forms for adjectives. For example, in Greek ἡδύς ‘sweet’ is still used to agree with feminine nouns in Homer, while later Greek has ἡδεῖα. However, if we take this tendency as a rule, we must conclude that both the thematic and the athematic adjectives still retained a bipartite distinction in PIE. This would mean that the daughter branches developed the adjectival three-way distinction independently – which is however not a trivial development, especially with additional similarities such as the distribution of **-eh₂* and **-ih₂*.

Matasović (2004: 155-6) suggests that adjectival agreement with **-eh₂* arose independently in daughter branches post-IE (presumably introduced from the pronoun, although he is not explicit on this point). As to the agreement with **-ih₂*, Matasović proposes that it did not occur on any athematic adjectives except for participles in PIE, and that this **-ih₂* may not have been the same **-ih₂* used as a motion suffix, but a pronominal element which was added to mark agreement with feminine nouns. In my opinion, this explanation runs into a few problems. Firstly, the assumption that participles knew agreement in **-ih₂* seems as problematic as agreement for all other adjectival classes, considering that e.g. Latin does not have a separate feminine form for the participle (m./f. *ferens* versus Skt. f. *bhāratī*, Gr. f. *φέρουσα*). Secondly, the theory does not explain the distribution of thematic and athematic adjectives for **-eh₂* and **-ih₂*: if **-eh₂* spread as a productive agreement marker, why did it not spread to the unmarked athematic adjectives too? Finally, reconstructing two suffixes which are identical both formally and semantically is hard to justify without very good reasons, which Matasović does not offer.

In the last sentence of his paragraph on agreement, Matasović adds – without further introduction – that “[i]t might well be that the agreement of adjectives with feminines was optional in the proto-language”. If this was the case, however, there would be no need to assume a post-PIE innovation of adjectival agreement. We could then assume that the discrepancy in e.g. the thematic adjectives of Greek vs. Latin and Sanskrit would be a consequence of differently generalised options.

I think, however, that there might be an easier and more straightforward solution to the lack of fully feminine adjectival declensions. It generally seems to be implicitly assumed that the declensions of PIE need to have been homogeneous in this aspect: in other words, that either *all* thematic adjectives had a feminine form, or none of them. As far as I have been able to see, however, there is no good reason to believe so. As we see in the thematic second declension in Greek, it is well possible that some adjectives have a feminine (*νέος, νέα*), while others do not (*φορός*); only through time, we see the feminine spread.

Another possibility is that agreement depended on the syntactic position of adjectives; that is to say, that attributive and predicative adjectives were not marked for gender to the same extent. This also has parallels. In Dutch, for example, adjectives show gender agreement in attributive use with the indefinite article (e.g. neuter *een zwart paard* ‘a black horse’ versus common *een zwarte koe* ‘a black cow’, with the ending *-e* added to the adjective), but not in predicative position (*een paard / koe is zwart*; neither receive an ending.) As shown by Corbett (1979), attributive adjectives are more likely to show morphological agreement than their predicative counterparts, due to their closer semantic distance; such a difference could also have played a role in PIE, creating two generalisable options for the daughter languages.

PIE was a living language, and we should not expect it to be more regular or heterogeneous than its daughters. It therefore seems possible to me that the spread of feminine agreement in the adjective was in an early stage in PIE – limited to a small number of lexical items and perhaps to certain adjectival positions, but nonetheless enough to establish a distribution between the two relevant suffixes. The situation would have resembled that in Greek, but with fewer three-gender adjectives. In the daughter languages, the spread of the feminine progressed, supported by agreeing pronouns and perhaps the spread of the same suffixes in the nouns. However, this did not happen in the same chronology everywhere; for example, while in Greek some thematic adjectives remained two-termination and the present participle acquired a feminine form, we see exactly the opposite in Latin.

Of course, this still requires a good explanation for the rise of adjectival agreement and the associated distribution in the first place, but at least we do not need to assume an accidentally identical development in different daughter branches, or the existence of an extra suffix of similar function and identical form.

3.1.3 Feminine agreement in the pronoun

Apart from the adjective, PIE also knew agreement on the pronoun. However, not every pronoun had separate feminine forms.

The two demonstrative pronouns which are commonly reconstructed for PIE (e.g. Beekes 2011: 225ff.) both have a feminine paradigm. Firstly we have **so*, whence Greek δ , Skt. *sá*, OCS *tъ* and Go. *sa*. The feminine equivalent is **seh₂*, which can be securely reconstructed on the basis of Gr. η , Skt. *sá*, OCS *ta* and Go. *so*.¹⁰ Interestingly, only the masculine and feminine nominative of the paradigm show an initial **s*: the neuter is **to(d)* (Gr. $\tau\acute{o}$, Skt. *tád*, OCS *to* and Go. *þata*), and all other cases have an initial **t* as well. Thus for the accusative we find m. **tom*, n. **to(d)* and f. **teh₂m*. As we see, both in the nominative and accusative, the feminine form looks like the masculine form with the **o* replaced by **-eh₂*.

Beside **so*, **seh₂*, **to(d)*, we can also reconstruct the demonstrative **h₁e* (Skt. *ayám*, Lat. *is*, Go. *is*), which has a feminine form **(h₁)ih₂* (Skt. *iyám*, Lat. *ea*). Here the masculine rather appears to have been supplemented with a suffix **-ih₂* in order to form the feminine.

In the oblique cases of both **so* and **h₁e*, the feminine and masculine differ not only in suffix, but in another aspect as well. In the dative of **so*, for example, m. **tosmōi* (Skt. *tásmāi*) stands next to f. **tesjeh₂ei* (Skt. *tásyai*). Beside the difference **-o/*-eh₂*, we also see that the element **sm* in the

¹⁰ The only branch which seems to contradict a reconstruction **seh₂* is Tocharian, where the expected outcome would be PToch. **sā* rather than attested ToAB **sā* < PToch. **sa*. It is generally agreed that the Tocharian form is an innovation, although explanations for the development vary: suggestions by Fellner (2014: 13-4) are Kuiper's Law (loss of the laryngeal in pausa) and replacement of *-ā* by *-a* in analogy with the athematic inflection. Unfortunately, I think Kuiper's Law is not necessarily applicable here, as I do not see why adjectives would often be used before a pause; replacement from the adjectival system is also problematic, as we find *-ya* rather than *-a* in the adjectives (Del Tomba 2020: 210). In chapter 5 we will come back to this case.

masculine form has been replaced by **si* in the feminine. The same happens in other oblique cases, as is clearest in Skt., e.g. abl. m. *tásmād* vs. f. *tásyās*, and loc. m. *tásmīn* vs. f. *tásyām*. In the paradigm of **h₁e* the same phenomenon is visible; in Sanskrit we find e.g. abl. m. *asmād* vs. f. *asyās* and dat. m. *asmái* vs. f. *asyái*.

The origin of these oblique forms is somewhat of a mystery. Considering that **so* and **to* can likely be equated with the Hittite sentence-initial conjunctive particles *šu* and *ta* (Kloekhorst 2008: 801), it is possible that these pronouns with their additional **sm* and **si* are in origin particle chains which have been univerbated and grammaticalised. Indeed, in Hittite we already find *=šmaš* as an enclitic pronoun. The question is then where this element and its counterpart **si* come from, and why they were interpreted as gendered elements.

The element **sm* is generally identified as **sem-* ‘one’, found in forms such as Gr. εἷς < **sem-s*, and Lat. *sēmi-* ‘half’ < ‘one of two’ (Beekes 2011: 210). It is often assumed that **si* must somehow be related to this form; for example, Schmidt (1898) suggests that **si* is a simplification of **sm-ih₂*, through a sound law **sm_i > *s_i*. The Greek form μῖα ‘one’ would then be a relic of the full form and ἴα ‘one’ would be derived from **sih₂*. To support this assumption, Schmidt refers to the distribution of both forms in Homer, where forms with *m* are the majority in the direct cases, while we mostly find ἴα in the oblique cases. This agrees with the lack of **m* in the oblique feminine pronouns above.

As De Vaan (2019) shows, however, this explanation runs into several problems. Firstly, the lack of aspiration in ἴα is hard to account for from a reconstruction **sih₂*. Secondly, there is no other evidence supporting a sound law which would reduce **smih₂* to **sih₂*, and even if it occurred, the productivity of **sm-* would lead us to expect analogical restoration.¹¹ There is no urgent need to link the forms to each other either, since we do not necessarily need a derivation from **sm*, to explain ἴα; Beekes (2010: 571) rather reconstructs it as an inflected form of the pronoun **h₁i-*. De Vaan therefore assumes that **sm* and **si* are entirely different stems.

The question is then, of course, where else **si* would come from. De Vaan follows Kortlandt (2010: 41), who thinks that *i*-vocalism in pronouns originally corresponded to inanimateness. The element **si* would then first have been used for inanimate forms, after which is spread to the feminine; this would be explainable because, according to De Vaan (p.215), “the canonical PIE feminine gender developed out of inanimacy markers, such as the collectives in **-h₂*”. Forms containing **sm*, on the other hand, would have been derived from similar concatenations with an original masculine reference.

Apart from the assumption that the feminine originated in the collective – which I think is far from certain – it is also somewhat unclear to me why, if **si* originally marked inanimateness, we find **sm* in the oblique cases of the neuter pronominal forms. Moreover, the entire hypothesis is rather speculative: there are no attestations showing that **si* was ever inanimate, and Kortlandt’s reconstruction of the pronominal system is the only reason to assume so. From a methodological point of view, this is not ideal.

¹¹ There might even be arguments against the proposed sound law **sm_i > *s_i*. For example, I find it suspicious that the similar **Cm_i* cluster in Greek βαίνω < **g^wm-jo-* clearly retains its nasal.

Another possibility is that **si* is related to another form for ‘one’, namely Hittite 1-*iš*, acc. *ši-an* ‘one’ (Kloekhorst 2008: s.v.). The feminine pronouns would then be a concatenation of a similar meaning as the masculine **to-sm-*. The problem here, however, is that there is no good reason why this other ‘one’ would be associated with a feminine gender, or why the difference between **sm* and **si* should be interpreted as a contrast in referential sex. The problem of the feminine oblique pronouns in **si* therefore remains unsolved for now; I will discuss another possible explanation in chapter 5.

Beside the two demonstratives discussed above, PIE had the interrogative pronoun **kwe/i-*, reflected in e.g. Hitt. *kuis*, Gr. *τίς* and Lat. *quis*. All descendants have one form agreeing with both masculine and feminine, so that we can conclude that PIE knew no separate feminine form in this paradigm. However, beside **kwi-*, we also find a stem **kwo-*, which Beekes (2011: 230) assumes was the adjectival form of the same pronoun. Here we *do* find feminine forms, e.g. Skt. *kás, ká, kát/kím*, Lat. *quī, quae, quod*, Go. *hwas, hwo, hwa*. As the feminine cognates can go back to the same preform **kweh₂*, this can be reconstructed for PIE. Note that, as with **so, *seh₂*, the feminine suffix appears to replace the **o*.

In short, we can be fairly sure that PIE knew at least some feminine pronominal forms, namely **seh₂* to m. **so* and **(h)ih₂* to m. **h₁e*. In some cases, these feminine forms also contained an element **si*, which corresponded to masculine **sm* ‘one’. On the other hand, the new gender had not spread throughout the entire pronominal system yet: interrogative **kwi-* retained the bipartite distinction it shows already in Anatolian, even while its adjectival stem **kwo-* probably did have a feminine **kweh₂*.

3.1.4 Semantic groups

In the preceding paragraphs, we have seen the most important formal characteristics of the PIE feminine. Equally important is the semantic aspect: what semantic categories do we find among the feminine nouns, and what does that tell us about the original categorisation of the PIE gender system? I will give an overview below; a more extensive collection of material can be found in Matasović (2004).

1. Feminine reference. Unsurprisingly, we do find quite some words referring to female humans or animals in this gender. Examples are **gwenh₂-* ‘woman’ (Skt. *jáni-* ‘woman’ and *gná-* ‘goddess’, Gr. *γυνή*, ToB. *šana*), **meh₂tr-* ‘mother’ (Skt. *mātr-*, Gr. *μήτηρ*, Lat. *māter*), *d^hugh₂tēr* ‘daughter’ (Skt. *duhitár-*, Gr. *θυγάτηρ*, Go. *dauhtar*) and **neptih₂-* ‘granddaughter’ (Skt. *naptí-*, Lat. *neptis*, OHG *nift*).

2. Animals, which are not always of female sex. Examples are **h₂enh₂ti-* ‘duck’ (Skt. *āti*, Gr. *νῆσσα*, Lat. *anas*), **h₃ey-i-* ‘sheep’ (Skt. *ávi-*, Gr. *οἶς*, Lat. *ovis*) and **(H)uob^hseh₂* ‘wasp’ (Lat. *vespa*, OHG *wafsa*, Lith. *vapsvą*). Often large and dangerous animals are masculine, whereas smaller animals and especially insects receive the feminine gender (Matasović 2004: 93).

3. Flora. In this category we find one curious case: **b^heh₂go-* ‘oak, beech’ (Lat. *fāgus*, Gr. *φηγός*, OGH *buohha*) which is one of the few feminine *o*-stems. Matasović gives two more forms. However, **h₂og-eh₂-* ‘berry, fruit’ is only securely attested in Balto-Slavic (Lith. *úoga*); a possible link with

Tocharian is doubtful (Derksen 2014: s.v. *úoga*). More reliable is **d^hoHneh₂* ‘grain’ (Lith. *dúona*, Skt. *dhānās*, ToB. *tāno*).

4. Natural phenomena. Examples are **h₂eūsōs* ‘dawn’ (Skt. *uśás*, Gr. ἠώς, Lat. *aurōra*), **nokwt-* ‘night’ (Skt. *nákt-*, Lat. *nox*, OGH *naht*) and **h₃migh^heh₂-* ‘mist’ (Gr. ὀμίχλη, Lith. *miglà*, Arm. *mēg*). The latter is reconstructed by Matasović as a collective of a neuter **h₃migh^hlom*, which he argues yielded OIr. *nél* ‘cloud’ with addition of an initial **n-* from **neb^hos* ‘cloud’. However, *nél* is more easily explained as a loanword from British Celtic (W. *niwl*), which was in turn borrowed from Lat. *nūbilus* ‘cloud’; still, of course, we cannot strictly disprove the existence of an earlier neuter singular form.

5. Body parts. Examples are **h₃eHleneh₂-* ‘elbow’ (Gr. ὠλένη, Lat. *ulna*, Go. *aleina*); **k^louⁿⁱ-* ‘hip’ (Skt. *śróṇi-*, Lat. *clūnis*, OIc. *hlaun*), **g^hes-r-* ‘hand’ (Gr. χεῖρ, Hitt. *keššar*, ToA *tsar*), **g^wriHueh₂-* ‘neck’ (Skt. *grīvām*, Latv. *grīva*) and **dn^guh₂-* ‘tongue’ (Skt. *jihvā-*, Lat. *lingua*, Lith. *liežuvis*). According to Matasović (p.113) “there appear to be no semantic rules for gender assignment in this category”; for example, a distinction between ‘passive’ and ‘active’ organs and body parts does not explain the distribution.

6. Tools and manufactured objects. We do not find many feminine nouns in this category; the reliable examples adduced by Matasović are **neh₂u-* ‘boat’ (Skt. *nāu-*, Gr. ναῦς, Lat. *navis*; the PIE form is probably derived from **(s)neh₂-* ‘to float, to swim’), **h₂enHteh₂-* ‘door frame’ (Skt. *ātā-*, Lat. *antae* (pl.), Arm. *drand*) and **westi-* ‘clothing’ (Lat. *vestis*, Go. *wasti*, Arm. *zgest*). The latter is an example of an abstract derivation with concrete meaning.

7. Abstractions. This category contains quite some feminine nouns. Examples are **k^woineh₂-* ‘punishment, vengeance’ (Gr. ποινή, Lith. *káina*, Av. *kaēnā*), **d^hg^whⁱti-* ‘decay’ (Skt. *kṣīti-*, Gr. φθίσις, Lat. *sitis*) and **menti-* ‘mind’ (Skt. *māti-*, Lat. *mens*, Lith. *mintis*). Generally, we see that abstracts in **-eh₂*, **-ti* or **-i* are assigned to the feminine gender, whereas other abstracts can also be neuter. Masculine abstracts are as good as non-existent.

8. Collectives. Matasović gives one feminine example from the category of substances, namely **h₂ulh₁neh₂-* ‘wool’ (Skt. *úrṇā-*, Lat. *lāna*, OHG *wolla*, possibly Hitt. *hulana*). As seen before, mass nouns and substances are generally neuter in PIE. This exception can be explained: it is likely a collective formed to an older neuter **h₂ulh₁no-*, as reflected in Gr. λῆνος and W *gwlan*, which was interpreted as feminine due to its suffix. Other cases of semantic collectives within the feminine gender are **teuteh₂-* ‘people’ (Umbr. *totam* (acc.), OIr. *túath*, Lith. *tautà*) and **kerd^heh₂-* ‘herd’ (Go. *hairdo*, Ru. *čeredá*). Some words discussed above might also fit in this category, such as **d^hoHneh₂* ‘grain’.

All in all, it is clear that the feminine gender consists of more than only females, abstracts or reanalysed collectives. A theory for the origin of the feminine should therefore take this wide range of semantics into account.

3.1.5 Common or neuter

As summarised by Lundquist and Yates (2018: 2099), theories on the origin of the feminine fall mostly into two categories: “(i) the feminine developed primarily via the reanalysis of PIE neuter “collectives”; or (ii) the feminine arose primarily from within the animate gender”. The first view is supported by e.g. Schmidt (1889), Harðarson (1987), Tichy (1993), Matasović (2004) and Litscher (2014), the second by Meillet (1931), Luraghi (2011) and Melchert (2014). Formal arguments can be given for both theories: for example, the similarity of collectives to feminine nouns – including the lack of a nominative *-s* – might support the first, whereas the overlap of masculine and feminine in many stem classes could be taken as evidence for the second. As these arguments do not immediately present a clear favourite, it is interesting to see whether we can trace back PIE feminine nouns to the common or the neuter gender in Anatolian.

Matasović (2004) states that “more often than not, the cognates of LPIE feminines in Hittite belong to the neuter gender” (p.167). Unfortunately, this assumption is meagrely supported. He gives two examples of Hittite neuters becoming PIE feminines: Hitt. *pattar* ‘tray, basket’, linked to Gr. *πατάνη* ‘dish’ and Lat. *patera* ‘broad shallow bowl’ and Hitt. *ḫenkan* ‘death’ with OIr. *écen* ‘id.’ and Gr. *ἀνάγκη* ‘necessity’. As to the first, Kloekhorst (2008: s.v. *pattar*) is doubtful about the link with *πατάνη*; *patera* is not mentioned at all, and is derived by De Vaan (2008: s.v. *pateō*) from an entirely different verb. Beekes (2010: s.v.) assumes *πατάνη* is a Pre-Greek noun, which can then not be cognate to the Hittite form. In other words, the connection is uncertain in all directions. The connection between *ḫenkan* and the other forms is also rejected by Kloekhorst (s.v. *ḫai(n)k-tta(ri)*); moreover, Matasović himself reconstructs *écen* as belonging to **neku-* ‘violent death’ in his Celtic etymological dictionary (2008), in which case the form cannot even be cognate to *ἀνάγκη*. In other words, the support given for the assumption that the feminine is mostly neuter, is paper-thin.

That is not to say that no original neuters ended up being feminine in PIE. It is at the very least suggestive, for example, that the *ti*-abstracta and some feminine forms in **-eh₂* and **-ih₂* are the only non-neuter nouns which are inflected according to the proterodynamic inflection; all other examples of this inflection type are neuter (Viti 2015: 117). To me this strongly suggest that the abstracts derived with these suffixes were originally neuter indeed. On the other hand, we also have ample examples of the opposite: for example, Hitt. *keššar* ‘hand’ is common gender, whereas Gr. *χείρ* is feminine, and idem for Hitt. *ḫāyi-* ‘sheep’ vs. Latin *ovis*, Hitt. *gimm-* ‘winter’ vs. Lat. *hiems*, and CLuw, *tijammi-* ‘earth’ vs. Gr. *χθών*.¹² Moreover, we have already seen common gender nouns in **-eh₂* in Anatolian, such as *ḫāššā-* ‘hearth’ (cognate to clearly feminine Lat. *āra*), which suggests that this source of later feminine nouns was common gender as well. Matasović’s stress on the neuter cognates of feminine nouns (and his theory that the feminine gender primarily arose from the neuter) therefore seems somewhat unfounded. That is not to say that we do not have feminines which were originally neuter, but they are certainly not an overwhelming majority.

I think it is most likely that the lexicon of the later feminine category was a mix of words taken from different sources: singularised collectives, originally common gender forms denoting both female and lifeless referents, and old neuter abstracts. But which of the formal or semantic

¹² The Hittite cognate *tēkan* is neuter (as opposed to the CLuw. common gender form). The reason for the reinterpretation of the gender in Hittite is likely that the form, like all PIE forms of a structure **CC-ēr*, did not have a nominative *-s* (Kloekhorst 2008: s.v. *tēkan*).

categories discussed above formed the original core of the new gender? And which only joined this new category later, and for what reasons? This, again, is a question which I will consider in more detail in chapter 5.

3.1.6 The feminine gender summarised

In short, the PIE feminine must have been a full-fledged gender with an own set of pronouns and at least some adjectival agreement. The latter had not spread through the entire lexicon; nonetheless, it probably already had a distribution in which thematic adjectives received the suffix **-eh₂* and athematic adjectives the suffix **-ih₂*.

The nouns which ended up in the new feminine gender are a mix of several formal and semantic types. We have words marked by the typical suffixes **-eh₂* and **-ih₂*, but also several words which do not contain these markers: root nouns, *i*-stems, *u*-stems and even the occasional *o*-stem. Beside nouns with female reference semantics, we find abstract nouns, flora and fauna, concrete objects, natural phenomena and body parts. With such a heterogeneous mixture of formal and semantic features, it is likely that assignment to the feminine depended on a combination of characteristics, which may have varied over the course of the development of the gender.

In order to know what functions the feminine gender may have had over time, we should also know what functions the characterising suffixes had during its development; after all, the fact that these suffixes became associated with the gender suggests that their role overlapped at least at some point. In the paragraphs below, I will therefore discuss for PIE the three morphemes that we saw in the previous chapter as well: **-eh₂*, **-ih₂* and **sor*.

3.2 **-eh₂* in Proto-Indo-European

The functions of **-eh₂* in PIE are very similar to those we reconstructed for PIA in the previous chapter. The important exception is the role of the suffix as a female reference marker.

3.2.1 Feminine

As set out more elaborately above, the suffix **-eh₂* must have had female reference semantics in PIE to account for its identical function as a female motion suffix in so many IE branches. It is unclear to what extent this function had already spread through the lexicon, considering how challenging it is to reconstruct even one secure example for PIE itself, but that it was present with this meaning somewhere in the nominal system is quite necessary.

It would be redundant to repeat all the information given in paragraph 3.1.1. In the context of the suffix's development, it is only important to stress that this specific function is entirely innovative compared to PIA: in Anatolian we find no traces of **-eh₂* used as a feminine reference marker. The development of this new semantic aspect is one of the main questions in the development of the feminine gender. In some way, it must follow from the many faces of the suffix as we have

reconstructed it for PIA, but from what function exactly is unclear: effectively every possibility has been proposed in earlier literature. In order to find the most realistic scenario, I will discuss the other meanings of **-eh₂* below and consider their suitability as a source of feminine meaning.

3.2.2 Collective

In the previous chapter, we saw that Anatolian collectives could be built both to common gender nouns and to neuter nouns. For that reason, we can reconstruct a collective marked by **-eh₂* for PIA. Now what had become of this category by the time of PIE?

The status of the collective in Core IE languages is debated. It is clear that it was at least no longer productive, for the simple reason that the originally collective ending **-eh₂* had by now acquired a clearly distributive meaning as the ‘normal’ plural ending of the neuter gender. Its countable nature can be seen immediately in examples such as Skt. *trīṇi śīrṣā*, ‘three heads’ and Gr. δέκα τάλαντα ‘ten talents’.

This does not necessarily mean, however, that *all* instances of **-eh₂* in this function had become distributive. As noted first by Eichner (1985), we find a number of relics in the masculine gender where it appears that **-eh₂* has been retained in its original collective meaning, which was possible because these forms already had another way to form a distributive plural. Both in Greek and Latin, we find a number of masculine nouns which form two different plurals, of which the one in resp. *-α* or *-a* appears to have a more collective sense. The most well-known example in Greek is μηρός ‘thigh’, which has both μηρούς (for several pieces of meat) and μηρα (for a mass of meat which is burned). Similarly, κύκλος ‘wheel’ can form both κύκλοι and κύκλα, and for ἀστήρ ‘star’ we have the collective plural ἄστρα. In Latin *locus* ‘place’ has *loci* and *loca*, and similarly *iocus* ‘yoke’ forms *ioci* and *ioca*, cognate to Umbr. *iuka* (Matasović 2004: 144-9). Interesting too is Umbr. *ueiro* ‘men, people’, which appears to be an **-eh₂* derivation of a cognate of Lat. *vir* ‘man’ (Weiss 2009: 99). For Indo-Iranian, Nussbaum (2014) adds the pair of Skt. *párvata-* ‘mountain’ vs. YAv. *pauruuatā-* ‘mountain range’.

Matasović (2004: 144-9), however, argues against the possibility of forming collective plurals to masculine nouns. According to him, all examples in Core IE are rather nom.-acc. n. pl. forms of substantivized adjectives, which he states is possible because all strong examples are thematic stems built to verbal roots. Thus the original meaning of μηρα was ‘the measured parts’, etc.

Although this is indeed possible for some of the forms, there are also a few cases where this solution does not work so well. Firstly, as Matasović admits himself, Gr. ἀστήρ is not thematic, which makes it unlikely that ἄστρα is adjectival in origin. Secondly, although a neuter plural meaning is fine for cases such as ‘wheels’ or ‘places’, I find it hard to believe that a plural for ‘man’ such as *ueiro* would ever go back to a neuter adjective ‘the manly things’ – after all, ‘man’ is about the most decidedly non-neuter meaning one can imagine. Finally, Matasović states that “the Hittite material is irrelevant here” (p.148, fn.319), as he is discussing the question of the animate collective in the latest stage of PIE, rather than in PIA. I would say, however, that since PIE descends from PIA, the situation in this parent language *is* quite relevant. After all, if a feature was already present in an earlier stage of the language, we need far less assumptions to posit its existence for this later stage than if we would have to assume it sprung out of thin air. In this case,

I think it is more economical to assume the plural forms in *-a* for animate nouns are a relic of the old situation than to assume that the old situation was lost without a single trace and that new forms, which were similar in both form and function to the old forms, arose independently.

Nonetheless, the scarcity of examples and the lack of semantic difference in some cases (e.g. *loci / loca*) suggests to me that the collective meaning of **-eh₂* was no longer productive in PIE. The only way in which this aspect of the suffix was continued was as the now clearly distributive plural of the neuter gender. A large-scale reanalysis to a feminine singular, as proposed by e.g. Matasović (2004), is not self-evident from that starting point.

Nonetheless, deriving the feminine meaning of **-eh₂* from this waning category in PIE is a popular solution, which was proposed by Brugmann as early as 1897. According to him, original abstract and collective nouns derived with **-eh₂* were reinterpreted as referring to female individuals; as a consequence, the suffix was reinterpreted as a feminine marker. His main example is **g^wenh₂-* ‘woman’, which he supposes was originally derived from an otherwise unattested root meaning ‘to give birth’. Tichy (1993) largely follows this account, but focuses only on the collective sense of the suffix: she argues that some collectives were interpreted as feminine while the suffix was still a derivational suffix, and that it became an inflectional plural ending only later. According to her, the reinterpretation started with **h₁uid^heueh₂-*, which originally denoted the bereaved next of kin and came to mean specifically ‘widow’. Litscher (2004) agrees with the derivation of the feminine from the collective, but assumes that the suffix became an inflectional ending first, and was interpreted as a gender marker with a feminine meaning after some neuter plurals were “felt to be too animate to be neuter”.

A problematic point for all these theories is that a reanalysis of words derived with **-eh₂* does not necessarily lead to a reanalysis of the suffix **-eh₂* itself. Although reanalysis of collective and abstract nouns to concrete, individual nouns is definitely possible (e.g. English *youth*, which can also be used to mean ‘young person’), such a reanalysis is usually a lexical rather than a morphological change (Fellner 2014: 12). In other words, although the development can occur in individual words, the suffixes themselves do not change in meaning: English *-th* is still only an abstract suffix. Moreover, the original meaning of the word is usually retained as well: *youth* can still be used to mean ‘the state of being young’ rather than ‘young person’. If this were the case for e.g. ‘widow’, we would expect to see some traces of a retained secondary meaning ‘bereaved family’. Only the reanalysis of a few individual forms is therefore not a sufficient explanation for the systematic semantic change of **-eh₂*.

Moreover, the number of collective nouns qualifying as the source of a feminine reanalysis is rather small: we seem to have only **g^wenh₂-* ‘woman’ and **h₁uid^heueh₂-* ‘widow’ – of which it is not even certain whether they were originally collective. Especially if we remember that most individual nouns in **-eh₂* appear to have denoted *male* individuals, less than a handful of female reference words form a rather meagre basis for such a drastic semantic shift in the suffix. An attempt to derive the feminine meaning of **-eh₂* from its original collective semantics is therefore in my opinion unfulfilling.

3.2.3 Abstract

As opposed to the collective, the function of **-eh₂* as an abstract suffix still appears to be quite productive in the different daughter branches. In some cases we can reconstruct formations for PIE, such as Gr. φυγή, Lat. *fuga* ‘flight’ < **b^hug-eh₂-* from **b^heug-* ‘to flee’, and Gr. *hēbē* ‘youth’, Lith. *jegà* < **iēg^{wh}eh₂-* ‘youth’. In other cases the abstract forms appear to have been created independently, such as Ved. *jaraṇā-* ‘old age’ from *jaraṇá-* ‘old’, Gr. ἀγάπη ‘love’ from ἀγαπάω ‘to love’, Lat. *noxia* ‘harm’ from *noxius* ‘harmful’, OHG *wāra-* ‘truth’ from *wār* ‘true’. As is clear from these examples, the suffix can be used to derive abstracts from both verbs and thematic adjectives.

Abstracts which are derived in this way are always assigned to the feminine gender; as far as I have been able to find, this is the case in all daughter languages. It therefore seems reasonable to assume this was also the case in PIE.

Moreover, **-eh₂* is not the only abstract suffix which is generally feminine; the same is the case for e.g. **-ih₂* (see paragraph 3.3.3) and **-i*. This connection between the PIE feminine and the semantic class of abstract nouns has been reason for some scholars to derive the feminine semantics of **-eh₂* from its abstract meaning. This is the solution preferred by e.g. Luraghi (2009a), who criticizes the collective-based theories for failing to explain the overlap between abstract semantics and the feminine gender in PIE.

However, here we run into the same issue of lexical change versus morphological change as with the collective above. Although abstract nouns are quite frequently reinterpreted as individuals – e.g. English *youth*, NHG *Bedienung* ‘waiter, waitress’ < ‘service’ and OCS *sluga* ‘servant’ < ‘service’ – in none of those cases the reanalysis leads to a semantic change in the suffix itself. Moreover, Luraghi does not give a single example of a lexical item which may show a reinterpretation of abstract to feminine in PIE; indeed, as far as I have been able to find, examples of this type in IE languages are usually independent changes within the daughter languages.¹³ As such, we have no reason to believe that the change of abstract to female reference noun occurred in PIE on a systematic basis, making semantic change in the suffix particularly unlikely.

3.2.4 Concrete

As in the Anatolian languages, some PIE forms in **-eh₂* have a more concrete meaning. Mentioned in the last chapter were Lat. *āra* ‘altar’, Skt. *īṣā* ‘hitch-pole’ and Gr. ἀύλή ‘courtyard, precinct’. There are also cases without Anatolian cognates, such as **h₂enHteh₂-* ‘door post’ (Skt. *ātā-*, Lat. *antae*) **uoh₂eh₂-* ‘twig’ (Skt. *vayā-*, OCS *věja*) and **louksneh₂-* ‘moon’ (Lat. *lūna*, OCS *luna*). In some cases, the form in **-eh₂* exists beside a (masculine) thematic form, as with Gr. OE *hræn* ‘source, fountain’ < **krosneh₂-* next to Gr. κρουός ‘id.’ < **krosno-*, or Gr. ὀμφή ‘song, voice’ < **song^{wh}-eh₂-* next to Go. *saggws* ‘id.’ < **song^{wh}-o-* (Kroonen 2012: s.v., Beekes 2010: s.v.). Here again we see a closer connection between **-eh₂* and the thematic declension.

¹³ For example, OCS *sluga* ‘servant’ is cognate to Lith. *slaugà* ‘service’, suggesting that the change from abstract to individual only occurred within Slavic, and English *youth* was used in its individual meaning for the first time in the 14th century (OED: s.v.).

We find other independent derivations in the daughter languages as well, such as Gr. κλίνη ‘bed’ from the verb κλινω ‘to lean’, Lat. *toga* ‘outer garment’ from *tegō* ‘to cover’ and Ru. *korá* ‘bark’ from **(s)ker-* ‘to cut’. This points to a certain productivity of the suffix. We should keep in mind, however, that many examples of this use of **-eh₂* may be either old neuter plurals which have been reinterpreted (e.g. Gr. θύρα f. ‘door’ < **d^hur-eh₂* next to PGm. **dura-* n. ‘door’ < **d^hur-o-*) or older individual denotations which have undergone semantic change (e.g. Lat. *luna* ‘moon’ < **louksneh₂-*, originally ‘the shining one’, as still seen in Av. *raoxšna-* ‘shining’). Nonetheless, a cluster of forms in **-eh₂* denoting concrete objects apparently did exist in PIE, and the suffix may have remained in use in this capacity after PIE split up.

As far as I have been able to find, it has never been suggested to derive a feminine gender from this specific use of **-eh₂*. Indeed, I do find it hard to see how a class of exclusively inanimate objects could be interpreted by speakers as animate and feminine. We can safely conclude that this original function of **-eh₂* is an unlikely candidate for the origins of the PIE feminine.

3.2.5 Individuals

A final function of **-eh₂* in Anatolian was to derive words referring to individuals, e.g. *kumaza* ‘priest’, *mahana-* ‘god’ and *kbatra-* ‘daughter’. The same function is seen in Core IE languages. For example, we find Lat. *scrība* ‘scribe’, *agricola* ‘farmer’, OCS *sluga* ‘servant’, *vojevoda* ‘general’, Rus. *láda* ‘husband, wife’, Gr. νεανίας ‘young man’.

Clackson (2007: 105) states that “[w]here IE languages show masculine nouns in this declension class, such as Latin *agricola* ‘farmer’ or Greek νεανίας ‘young man’, they can be explained as post-PIE developments”. He does not further elaborate on this statement. It is indeed the case that some of these forms can be explained by secondary developments: for example, OCS *sluga* is usually reconstructed as an original abstract ‘service’ (cf. Lith. *slaugà* ‘servitude’), with a semantic development seen also in NHG *Bedienung* ‘service > waiter’. But there is no reason to assume an original meaning ‘scribing’ for *scrība*, and *láda* is derived from *lad* ‘harmony’; an abstract derivation from an abstract noun seems unlikely.

For the compound cases of this type it is also often suggested that they were formed with an abstract form as their second element, and that the result was subsequently interpreted as an endocentric form; e.g. *agricola* would be derived from **-k^woleh₂* ‘tilling’ > ‘someone who deals with field-tilling’ (Melchert 2014: 265). However, Fellner and Grestenberger (2016) argue that this is unlikely because PIE seems to have had a rule against *eh₂*-stems as second members of compounds, so that the **-eh₂* was often replaced with **-o* or **-i* (e.g. Gr. Gk. τιμή ‘honor’ vs. ἄ-τιμος ‘without honor’). When **-eh₂* is found in a compound, Fellner and Grestenberger therefore suggest that the form is an independent formation in a branch, making use of **-eh₂* in its individualising meaning.

Clackson would then be correct that the masculine forms in **-eh₂* are post-PIE innovations, but that does not mean that the type as a whole has to be an independent innovation of the different branches too. Quite the opposite, I would say: there is no conceivable reason why a language would develop a masculine use for a by then very productive feminine suffix, let alone why several of them would do so. The most sensible explanation for these forms is therefore that PIE did

indeed have an individualising function for $*-eh_2$, which was continued in its daughters; the existence of cases like *scrība* and *ladà* then perhaps contributed to the incidental reanalyses as seen in e.g. *sluga*.

Note that, even though all examples above are semantically masculine, there is no reason to assume $*-eh_2$ exclusively derived male individuals: in Anatolian the suffix could be used for referents of both sexes. However, it does make sense that all *recognisable* cases are masculine in the IE daughter languages. After all, feminine forms which were originally derived with this suffix have now become identical to other feminines in $*-eh_2$. We could even consider if it is possible that forms like $*g^wēnh_2$ - ‘woman’ and $*h_1uid^heuh_2$ - ‘widow’ were originally individualised formations rather than reanalysed collectives or abstracts. I think this fits their meaning better, but as we don’t know the semantics of the root underlying the forms, this must remain speculation for now.

In order to avoid the many problems that come with a change from collective to feminine, several scholars have suggested that perhaps $*-eh_2$ became a feminine suffix through reinterpretation of its individual meaning. This idea is advocated by e.g. Melchert (2014: 265), who states that “its attested use to form endocentric nouns referring to humans in various roles must have been the crucial starting point for its becoming a motion-suffix in a sex-based gender contrast”. As to the question why $*-eh_2$ would have acquired a feminine meaning, Melchert follows Luraghi (2009b: 128), who suggests that, with two more or less animate noun classes, the one marked by $*-eh_2$ was interpreted as feminine because females were linguistically always more marked than males in PIE. Of course, then the question remains why especially *this* suffix should be chosen, if markedness is the only relevant feature. Melchert goes on to suggest that the suffix was perhaps particularly well-suited as a feminine marker because it could also be used to mark that something or someone belongs to a group, but he also admits to the sketchiness of his ideas, stating that “[a] truly convincing scenario for the development of the feminine gender is likely to remain elusive” until more research on the subject has been done.

Although the individual meaning of $*-eh_2$ is at least closer to the female reference meaning than a collective or abstract meaning, I agree with Kim (2014: 129) that typological commonness is by far not enough to make a development from ‘marked’ to ‘feminine’ necessary or even particularly likely. Moreover, I would like to point out that in many cases both the masculine *and* the feminine form are marked, the masculine with the thematic $*-o$, the feminine with $*-eh_2$. Why would the marking of the thematic vowel not have been interpreted as feminine, if the choice was really entirely random?

Finally, if any suffix would have sufficed, it is oddly coincidental that the feminine in PIE ended up using the same suffix $*-eh_2$ that underlies the cases of apparent agreement in Lycian, as discussed in paragraph 2.1.1. The fact that $*-eh_2$ undergoes a very similar development twice, in different languages, suggests to me that there is a more structural reason for its use as an agreement suffix.

From the starting point of an individual suffix, we therefore do not arrive at a clear and convincing route to feminine meaning either. The unfortunate conclusion must be that none of the meanings of $*-eh_2$ attested in PIA can be considered a realistic source of its later use as a feminine marker. This is clearly a problem: after all, the feminine meaning of the suffix must have arisen in *some* way. In chapter 5, I will suggest another theory to account for the attested semantics and functions of $*-eh_2$. To see how this proposal fits in with the data, however, it is necessary that we first take a

look at the other feminine suffixes in PIE and the broader typological context of suffix semantics and gender change, as I will do below.

3.2.6 The nominative *-s

Nonetheless, one question sometimes brought up concerning the feminine gender can already be treated here: the fact that feminines in **-eh₂*, in the words of Lundquist and Yates (2018: 2096) “strikingly lack the characteristic final **-s* of other athematic non-neuter nouns”. How is this to be explained, especially for women and female animals, if the nominative ending **-s* is associated with the non-neuter genders, and therefore with animacy?

In the examples discussed in the chapter above, we can see that **-eh₂* did not receive a nom. sg. ending **-s* in any of its original functions. As this ending has been reconstructed as an original agentive or ergative ending (e.g. Uhlenbeck 1901), it seems that abstracts and collectives were, like neuter nouns, generally perceived as non-agents by speakers of PIE. Only the masculine individuals in **-eh₂* do sometimes acquire the ending secondarily in the daughter languages, e.g. Gr. *νεανίας*, but forms like *scrība* show that this was not the original state of affairs.

It stands to reason that the original non-agentivity of the suffix was brought over to the feminine gender, and that this is the reason that feminines derived with **-eh₂* did at least originally not get **-s*. Then the question remains, however, why the ending was not analogically added for female individuals as it was for their male counterparts. In discussing this question, Tefeteller (2020: 410) points out that the view that “human females, being “animate”, are therefore necessarily perceived as agents” ignores cultural differences between our modern worldview and that of prehistoric, patriarchal communities such as the Indo-Europeans. As a parallel, she refers to Tsez, a Northeast Caucasian language in which the feminine noun class sides with the inanimates in the plural, whereas the class for human males has its own animate plural.

Cases such as *scrība* and *sluga* show that in PIE and its daughter languages, the drive to secondarily mark agency with **-s* was not very strong even for the most agentive category of male individuals. I think we can reasonably assume that for female animals and individuals, who were possibly considered less agentive, there was little reason to supplement the original non-agentive suffix **-eh₂* with the ending.

3.3 **-ih₂* in Proto-Indo-European

We can then continue to the next PIE feminine suffix, **-ih₂*. This suffix is far more present in PIE than in PIA. Whereas in Anatolian it only shows up in a handful of female names from Kaniš, it fulfils several different functions in the daughter languages of PIE. I will discuss these below, followed by a short discussion on the origins of **-ih₂*.

3.3.1 Feminine

As described above, **-ih₂* is one of the two characteristic markers of the feminine gender in all Core IE languages. In PIE it marked the feminine gender on athematic adjectives; moreover, it must already have been used as a motion suffix, as shown by cases such as **deǵu-ih₂-* ‘goddess’ to **deǵu-o-* ‘god’ (see paragraph 3.1.1).

As opposed to **-eh₂*, **-ih₂* is already found with female semantics in Anatolian, albeit marginally, namely in women’s names in Kanišite Hittite. By the time we see the suffix again in PIE, it has clearly spread extensively through the nominal system, showing up in adjectives, numerals and inanimate nouns as well. The question how and why this happened is one of the questions which have to be answered satisfactorily in an account of the rise of the feminine gender in PIE. As with **-eh₂*, this means that we should also have a good idea of the other functions the suffix fulfilled in the protolanguage; after all, these may well have influenced the feminine capacity of **-ih₂*. Below I will therefore discuss the different meanings of the suffix.

3.3.2 Appurtenance

The central function of **-ih₂* is generally assumed to be possession and/or appurtenance (e.g. Balles 2004: 46-9, Kim 2014: 124). Note that these two options are in a way opposites, in that they mark the possessor in the first case and the object or individual being possessed in the second case. Thus we find e.g. **melit-* ‘honey’ (Gr. μέλι) with derived **melit-ih₂-* (Gr. μέλισσα ‘bee’ < ‘the one possessing honey’) and **d^hriǵh-* ‘hair’ (Gr. θρίξ,) with derived **d^hriǵh-ih₂-* (Gr. θρίσσα ‘hairy fish’ < ‘the one possessing hair’), but also PIE **h₂reh₁ǵnih₂-* ‘queen’ < ‘the one belonging to a king’ (Skt. *rājñī-*, OIr. *rígain*) from **h₂reh₁ǵn-* ‘king’ and Skt. *rathí-* ‘charioteer’ < ‘the one belonging to the chariot’ from Skt. *rátha-* ‘chariot’. Moreover, if the Italo-Celtic genitive in *-ī* can be reconstructed as another reflex of the same suffix, this is a clear example of appurtenance semantics (Balles 2004: 48).

According to Nussbaum (2014: 290) a close relation between possession and appurtenance is not unexpected, as their semantics converge in several contexts. For example, both possessive and genitival adjectives can convey a meaning ‘being made of something’, through an underlying construction of respectively e.g. ‘consisting of / possessing gold’ or ‘of gold’. For **-ih₂*, it is usually assumed that appurtenance is the more basic meaning (e.g. Balles 2004: 46-9): this function is most wide-spread, as can already be seen in the examples above.

This meaning of the suffix is also most often linked to the development of feminine semantics for **-ih₂* (e.g. Matasović 2004: 143). The idea is that the contrast between pairs such as **h₂reh₁ǵn-* ‘king’ and **h₂reh₁ǵnih₂-* ‘belonging to the king’ → ‘queen’ was grammaticalised, thereby creating a new motion suffix. A similar development can be found in e.g. Latin *-īna*. This suffix originally derived only denominal adjectives of the type *equīnus* ‘equine, belonging to horses’; however, through pairs such as *rēx* ‘king’ ~ *rēgīna* ‘belonging to the king > queen’ and *gallus* ‘rooster’ ~ *gallīna* ‘belonging to the rooster > hen’ it was interpreted as a feminine suffix *-īna*, as in e.g. *concupīna* ‘concubine’ from *concupō* ‘to sleep with’ (Weiss 2009: 288). In that capacity it could also be used as a naming suffix, e.g. *Agrippīna* from *Agrippa*, which looks like what we know about **-ih₂* in Anatolian. If **-ih₂* followed the same development from appurtenance to feminine, it should

have taken place before PIA in order to account for the Hittite women's names in $*-ih_2$; note that we have to assume that the appurtenance function of the suffix did already exist in PIA, even if it is not attested in the Anatolian languages.

The two uses of $*-ih_2$ above are most often mentioned in the literature concerning the PIE gender system. However, the third and less often discussed meaning of $*-ih_2$ might be equally relevant for the development of the feminine gender.

3.3.3 Abstract

There is material which suggests that $*-ih_2$, like $*-eh_2$, could be used to form abstract nouns. Wackernagel and Debrunner (1954: 405-7) give some examples in Sanskrit, such as *śáci* 'might' and *vépi* 'poetry'. In Germanic, likely cases are e.g. OE *nytt* 'utility' and ON *secchia* 'fight' (Casaretto 2004: 146ff.). Several examples are also found in Greek. Balles (2004: 48) points out that *λύσσα* 'rage' contains the suffix; moreover, the vocalic reflex *-ια* is productive as an abstract suffix in Greek, forming nouns such as *σοφία* 'wisdom' from *σοφός* 'wise' and *θεραπεία* 'treatment' from *θεραπεύω* 'to care for'. As I cannot think of a logical way to derive this meaning from either genitival or feminine semantics, I am inclined to conclude that the occurrence of this function in several branches is non-trivial and should be explained as a feature of the protolanguage. We can therefore reconstruct an abstract meaning for $*-ih_2$ in PIE.

It is somewhat striking that $*-eh_2$ and $*-ih_2$ show overlap in this respect. It raises the question whether it is possible that these two suffixes – which are formally very similar – are more closely related in origin. For completeness' sake, I will shortly discuss this point below; after all, the relationship between the two suffixes might give us relevant information about e.g. the origins of their morphological distribution.

3.3.4 The origin of $*-ih_2$

In the above, I have implicitly assumed that $*-eh_2$ and $*-ih_2$ were different suffixes. However, there is disagreement on this point. Quite some scholars assume that they are one and the same suffix in origin: e.g. Melchert (2014: 265), Hackstein (2011) and Stempel (2008: 181) suggest that $*-i(e)h_2$ arose when $*-eh_2$ was attached to *i*-stems formed with the abstract suffix $*-i$. On the other hand, Kim (2014: 125) argues that there is no historical relationship between the two suffixes. According to him, $*-i$ is mostly found on thematic bases, e.g. Lat. *ravis* 'hoarseness' from *ravus* 'hoarse'; since $*-ih_2$ on the other hand is associated with athematic forms, Kim concludes that we cannot equate the two formations. He therefore reconstructs two unrelated suffixes, $*-ih_2$ and $*-h_2$, for PIE.

Although we should indeed be careful not to lump every suffix together, Kim's argumentation shows an important defect here: his assumption that $*-ih_2$ is exclusively athematic is not well-supported. It is true that the suffix is found on athematic adjectives in the last reconstructable stage of PIE, but this does not mean it always had the same limited distribution: on the contrary, there are several arguments to suggest it did not. Interestingly, the *Paradebeispiel* of the suffix, $*deǵu-ih_2$ - 'goddess', stands in contrast to a masculine *o*-stem, $*deǵu-o-$ 'god'; the adjectival Greek reflex *δῖα* has a thematic masculine *δῖος*. There are more examples of $*-ih_2$ feminines to thematic

nouns, such as Go. *pius* ‘servant’ < **teu-o-* with *piwi* ‘female servant’ < **teu-ih₂-*. The Italo-Celtic genitive in *-ī* also belongs to the thematic declension, suggesting again that **-ih₂* could originally be found here. Finally, even Kim himself reconstructs a wider distribution for **-ih₂*, with his view that “the feminine (singular) of all adjectives, thematic as well as athematic, in the last common ancestor of the non-Anatolian IE languages was marked by **-ih₂-*” and that **-eh₂* only spread after Tocharian split off” (2014: 123). In other words, since it appears that the exclusive association between **-ih₂* and the athematic adjectives is a later development anyway, this association is no reason to reject an original compounded suffix **-i-h₂*. It is possible that **-i* and **-ih₂* were no longer associated with each other by speakers when **-eh₂* took over the thematic adjectives, so that both suffixes could develop their distribution in a different direction.

A better counterargument would in my opinion be the semantics of the suffixes involved. I do not immediately see why a combination of an abstract suffix **-i* and an abstract/collective **-eh₂* would yield a suffix denoting appurtenance (whereas the abstract meaning of **-ih₂* discussed in 3.3.3 would be quite straightforward). The other way around is problematic as well: if we imagine appurtenance was somehow the original function of **-ih₂*, then how would it also have developed an abstract meaning? Considering the substantial gap between these two meanings, we could consider reconstructing two different suffixes with entirely different semantics. This would also agree with the Anatolian evidence, where we find no trace of an abstract **-ih₂*, while the use of the suffix in women’s names may well have developed from an older meaning of appurtenance. Summarized, it is possible that two different types of **-ih₂* were formed in different ways at different moments. The abstract **-ih₂* could be a post-PIA combination of abstract **-i* and **-eh₂*, whereas the appurtenance suffix **-ih₂* arose in another way before PIA. Stüber (2007: 9) suggests that this meaning may be built from a locative **-i* with collective **-eh₂*, creating a meaning “Vielheit dessen, was bei X ist”; it is also possible that the history of the suffix is simply no longer reconstructable, as Kim believes.

The exact origins of **-ih₂* and its relationship to **-eh₂* are not necessarily relevant for the development of the feminine gender, as it seems that in PIA they were at least separate suffixes with their own functions and distributions. However, the notion that **-ih₂* was not always limited to the athematic stems is of some importance for the reconstruction of the early PIE adjectival inflection.

3.4 **sor-* in Proto-Indo-European

The rise of **-ih₂* and **-eh₂* as female reference suffixes meant that **sor-* in PIE never reached the grammaticalised position that it held in the Anatolian languages. As discussed in paragraph 2.4, we only find traces of the word in a few compounds, such as **suesr-* ‘sister’ and **tisr-* < **tri-sr-* ‘three women’; there are no convincing reasons to believe it ever functioned as a grammaticalised suffix in PIE, let alone as an agreement marker. The fact that **sor-* has not brought forth any independent descendants in the Core IE languages is in my opinion suggestive. It may indicate that it had already become an archaism in PIE, which only lived on in compounds, while **g^wenh₂-* was otherwise used as the general word for ‘woman’.

From such a marginalised position in the language, I find it unlikely that **sor-* had much influence on the development of the feminine gender. Matasović (2004: 175) believes that **sor-* was the

second word to receive the new feminine agreement on pronouns and adjectives, and that from there agreement spread to other *r*-stems with female references, such as **meh₂tr-* ‘mother’ and **d^hugh₂tr-* ‘daughter’. Apart from the assumption that the spread of feminine agreement started from female semantics, this presupposes that **sor-* had a position in PIE prominent enough to influence the structural features of basic vocabulary such as **meh₂tr-* and **d^hugh₂tr-*. Such a position cannot be inferred from the evidence. When nouns with feminine semantics shifted to the new agreement pattern, prototypically female words like ‘mother’, ‘daughter’ and ‘sister’ were just as likely candidates for that switch as any word for ‘woman’.

For PIE, my conclusions on the role played by **sor-* in the development of the feminine gender are therefore mostly negative: I do not believe that its occurrence in numerals points to the existence of an early agreement system (as argued in paragraph 2.4), and I see no good reason to assume the word played a pivotal part in the spread of any grammatical innovation.

3.5 Proto-Indo-European: a summary

To summarise the chapter above, the PIE feminine and its relevant suffixes knew the following characteristics:

1. PIE had a three-gender system consisting of a masculine, a feminine and a neuter gender. Feminine nouns came from both the old common gender and the old neuter gender. Most feminine words have at least one of the following characteristics: they are semantically female, they are semantically abstract, they are semantically small, they are marked by **-eh₂* or **-ih₂* (e.g. as an old collective) or they are *i*-stems. Exceptions do of course exist.
2. Feminine agreement was expressed on the pronoun and the adjective with the ablauting suffixes **-eh₂* and **-ih₂*. At the time of PIE, **-eh₂* was associated with thematic stems and **-ih₂* with athematic stems, but there are indications that **-ih₂* originally knew a wider distribution and was limited to athematic forms only later.
3. The suffix **-eh₂* had several functions beside that of a feminine marker: it had developed into the neuter plural ending and could form concrete and abstract nouns. Its functions as a collective marker and a masculine agent suffix had become less prominent by the time of PIE.
4. The suffix **-ih₂* could also be used in multiple ways: beside the feminine gender, it marked abstracts and appurtenance. It is possible that these different functions were not historically related.

So how did this situation come to be? Before I will attempt to reconstruct the development of the feminine gender for PIE specifically, we need to take a short look at what developments are linguistically common in general. In the next chapter, I will discuss a few typological questions on the development of suffixes and genders or noun classes.

4. The typology of gender

Although this study focusses on the emergence of a gender in one specific language, PIE is by no means unique in this respect: other languages also undergo changes in their gender systems, sometimes during their attested period. Since every development we reconstruct for PIE should be linguistically sensible, data from other languages can help us distinguish realistic scenarios from explanations which have no known parallels and are therefore implausible.

In this chapter, I will first look at gender developments in other languages: how do grammatical genders come into being, and to what extent can the composition of a gender change after its original emergence? Following this, I will devote two paragraphs to broader questions on the development of suffixes. Paragraph 4.3 discusses how suffixes can change their semantics, and in paragraph 4.4 I consider to what extent personal names can give us information on the meaning or distribution of (gender) suffixes.

4.1 The emergence of genders

The primary function of gender appears to be reference tracking. Dahl (2000: 113) states that “it is a mistake to think of gender systems as systems for classifying things: to the extent that they do so it is secondary to their function to make it easier to keep track of links between constituents.” From that perspective, it is not surprising that languages generally have more genders in the higher parts of the individuation hierarchy – in other words, more animate genders than inanimate genders (Luraghi 2009b). Men, women and perhaps animals will usually be more frequent subjects of stories and conversations than inanimate objects or abstract concepts, and are therefore more in need of linguistic differentiation, which can be achieved through gender agreement. This also means that when a new gender is created, it will usually denote a category which speakers are expected to regularly single out in their language use.

New genders in a language can come into being in at least two different ways. A mechanism which is often cited in this context is described by Greenberg (1978), who discusses the development of agreement (and therefore of genders) based mostly on his research into African languages with multiple genders or noun classes. According to Greenberg, agreement often begins with classifiers (which are in their turn often derived from “nouns with a classificatory possibilities such as ‘woman’, ‘man’, ‘animal’”, according to Corbett 1991: 312). These classifiers are first attached to nouns, but then spread to demonstratives because “nouns are continuing discourse subjects and are therefore in constant need of referential devices of identification” (Greenberg 1978: 78). The classifiers are, in other words, used in conversations to distinguish different referents. From the demonstratives, the classifiers – which have now become agreement markers – spread to other modifiers such as adjectives and numerals as well.

As Luraghi (2011: 452) points out, however, such a scenario cannot account for gender systems in which we find no overt gender marking, such as the original bipartite system of PIA. Here the neuter and the masculine received no specific suffixes; the neuter was characterised only by the absence of separate nominative endings. For such cases, Luraghi (following Fodor 1959) reconstructs a second mechanism which can lead to gender differentiation, namely a different pattern of marking for core arguments, which is then extended to pronouns and other modifiers.

A parallel development can be seen later in the IE family: in Medieval Russian, masculine nouns with human referents were with increasing frequency marked with genitive endings when they were the object of a sentence. This pattern was then followed by the agreeing pronouns and adjectives. In this way, a fourth agreement class consisting of highly individuated nouns arose, with no new suffixes or classifiers, but a different marking pattern than that of the original masculine (Luraghi 2014: 223).

In the PIE feminine – as opposed to the masculine and neuter – we do clearly find characterising suffixes in the feminine gender, namely **-eh₂* and **-ih₂*. At first glance, a scenario like Greenberg's spread of classifiers would therefore seem most fitting to explain the rise of the third PIE gender. However, it should be kept in mind that the basic function of classifiers is – unsurprisingly – classification, and that **-ih₂* and **-eh₂* do not appear to have functioned as classifying suffixes at any point in their reconstructable history. That is to say, they do not classify existing nouns as e.g. abstracts, but derive new nouns, which they *make* abstract. The PIE feminine does therefore not look like a gender which arose from a classifier system.

So how can this be combined with its clearly overt marking? It is important to mention that Greenberg's description of the rise of 'classifier genders' intends to explain the emergence of gender as a *new* concept in a language: in other words, it does not describe the development of a new gender in a system where other genders already existed, but rather the rise of the phenomenon in a hitherto genderless language. Greenberg does not elaborate much on the extension of existing gender systems, except for stating that "[t]he way in which gender arises need not be the same as that by which the system can expand by the development of new genders" (1978: 79).

Corbett (1991: 313) is somewhat more specific on this point: he mentions that "gender systems may expand by adding new genders; this is generally done using existing morphological material". For example, Grebo, a Western Kru language, has created a third gender for animates beside its original human and non-human gender: the new gender is characterised by taking the human singular, but the non-human plural. In other words, not so much the markers but rather the pairing of the markers creates a new pattern of agreement.

Corbett also suggests that the creation of new demonstratives for specific semantic categories can lead to the emergence of new genders. Moreover, Aikhenvald (2004: 1042) notes that the reanalysis of derivational affixes as gender markers can also be the start of a gender. An example of both points can be found in the South Dravidian languages, according to the reconstruction given by Krishnamurti (2003). Proto-Dravidian had two genders, a masculine gender for human males and a feminine 'residue' gender for all other nouns, including semantic feminines. South Dravidian languages, however, have innovated a third gender which is exclusively feminine: in other words, here we find a three-gender system of masculine, feminine and all other nouns. The new feminine is characterised by the suffix *-al*, which Krishnamurti (2001: 128) reconstructs as a feminine motion suffix in Proto-Dravidian, e.g. **mak-al* 'daughter' next to **mak-antu* 'son'. This suffix was first extended to the pronoun: next to Proto-Dravidian masculine **awantu* and residue **atu* we now also find South Dravidian **awal* for the feminine gender, built to the masculine pronominal stem **aw-*. From there on, the suffix also spread to other modifiers such as adjectives.

This process looks remarkably similar to Greenberg's mechanism for the rise of gender, except that the spreading agreement marker is a derivative suffix rather than a classifier. Summarising, we can therefore say that both for entirely new gender systems and for additions to existing gender systems, there are roughly two ways of creating a gender. Firstly there is the option of using existing case endings in different patterns, e.g. by using an ending for different cases in different genders, or by combining singular endings with different plural endings. Secondly, a new gender can arise through spread of a classifier or (derivative) suffix, which first spreads from the noun to the pronoun, and is then analogically extended to other noun modifiers. The first possibility usually yields genders with no overt marking, whereas the second scenario ends up with a marker derived from the classifier or suffix involved. As we clearly have marking in the PIE feminine, a scenario similar to the emergence of the South Dravidian feminine is likely the best choice.

4.2 Changes in gender characteristics

Genders do not stop developing once they have come into existence. On the level of individual lexemes, this means that specific words can change their gender, both for semantic and for formal reasons. On a larger scale, the entire core semantic value of a gender can change, which can have profound consequences for the gender assignment rules within a language. In this paragraph, I will shortly discuss how and why these developments take place.

As with all other aspects of language, speakers are always attempting to create regularity in their gender systems. This can lead to change when a lexeme appears to defy the gender assignment rules, e.g. when its meaning does not fit its gender, or when its formal features and its semantics point to different genders. In the first case, both the gender and the meaning of a word can be changed. For example, in the Yiddish dialect of north-eastern Poland, the German neuter words *Weib* 'woman' and *Mädchen* 'girl' have become feminine *vajb* and *medjl*. And although the masculine Classical Arabic word *zawj* originally meant both 'husband' and 'wife', its meaning has narrowed to only 'husband', while a new analogical feminine *zawjat-* has been created for 'wife' (Ibrahim 2014: 53).

In the second case, when the form of a word matches with another gender than its meaning, several solutions are possible as well. Sometimes speakers simply pick one of the two options: e.g. Italian *la guardia* 'policeman' is feminine because of formal features, despite its male referent, whereas *il poeta* 'the poet' is masculine due to semantic reasons, even though the noun is marked with a feminine suffix. In other cases, the form of a word is altered in order to better fit its gender. For example, in some Italian dialects the feminine word *manu* 'hand' has been replaced by the more regular *mana* (Ibrahim, 2014: 53).

Semantic content is not the only reason for a noun to change its gender. Close association with other, similar nouns may have the same result. For example, French *été* 'summer' is masculine, while its ancestor Lat. *aestas* 'id.' is feminine; the reason for this change is likely that the other three seasons were masculine in French, thereby 'pulling' the summer to their gender. Another illustrative case is discussed by Corbett (1991: 98), who describes how in Dyirbal the animate gender also contains the word for 'fishing line' due to close association with the word for 'fish'.

If a handful of words moves from one gender to another, this has little influence on the structure of the system as a whole. However, when a larger number of words follows this process, it can blur the original semantic value of a gender, which may thereby change or even disappear entirely. In other words, attempts to create small-scale regularity can lead to irregularity and eventually loss of rules in the greater scheme.

An example given by Corbett (1991: 98) concerns the Bantu family. In this family, gender 1/2 is generally reserved for nouns denoting humans. However, in some languages we see that the category is shifting towards a gender for all animates. In Luvale only a few non-human animates have shifted to gender 1/2, such as *muumbe* 'jackal', which Greenberg (in Childs 1983: 28) suggests is because the jackal often plays a role in folk tales and is ascribed human traits in those contexts. However, the inclusion of some animals in the previously exclusively human gender can lead to confusion on categorisation among speakers, as a consequence of which more animals switch to gender 1/2. This has happened in Lunda, which is closely related to Luvale: in this language all animals have now been assigned to the formerly human gender.

In other cases, the 'invasion' of nouns which do not match the gender's core semantics does not change the entire meaning of the gender, but rather establishes a semantic 'sub-category' within it. Deutscher (2005: 265) gives the example of Gurr-goni, which has (among other genders) a category for vegetables and plants. However, since this included trees, it also included canoes made from trees, as a consequence of which the gender was reanalysed as *also* containing all means of transport. The effect is that new nouns for transportation means, such as borrowed *erriplen* 'airplane' also ended up in what is still for the largest part a vegetable gender. Another case of a gender with sub-semantics is the feminine of Afro-Asiatic, which – interestingly similar to the PIE feminine – also includes the subcategory of abstract nouns. Unfortunately, it is unclear through what developments exactly this situation arose, and what the original core function of the gender was in this case (Luraghi 2014: 221).

4.3 Changes in suffix semantics

As we have seen, many genders are not only semantically, but also morphologically motivated; the formal assignment rules may even be strong enough to assign words with certain suffixes to genders which are semantically not a good fit, as with the example of *la guardia* above. For the PIE feminine this is especially relevant: it looks as if several categories of nouns were grouped together in this gender because they were all marked with **-eh₂* and **-ih₂*. Unfortunately, however, it is not entirely clear why especially the first of these acquired a feminine meaning. In order to answer this question, we have to know first how suffixes change their meaning in general; only then we can test the different theories against each other.

In paragraph 3.2.3-4, we already saw how suffixes generally do *not* change in meaning: through semantic change in a single lexical item. For example, even though English *youth* came to mean 'young person' already in the 14th century (OED, s.v.), the suffix *-th* remained productive only as an abstract suffix in the following centuries: in the 17th century, Horace Walpole – famous for his neologisms – still used it to form innovative abstract nouns such as *gloomth* and *greenth*. On the other hand, it is clear that suffixes *do* sometimes change in meaning. So how does this come about?

Unfortunately, not much has been written on lexical change in derivational morphology. One of the important reasons is that it is often hard to exactly determine the meaning or function of a particular affix; often it has multiple meanings, many of which may overlap with other affixes. Whether studies find lexical change in affixation can therefore depend to a large extent on the exact model used to describe the meaning in the first place (Schulte 2017: 43). Moreover, studies which do find a development in meaning often report a *decrease* of functions (e.g. Haselow 2011 for MoE *-ness*). The material on *new* meanings for suffixes is therefore rather scarce.

We already shortly saw an example of new meaning in paragraph 3.3.2, which discussed how the use of Latin *-īna* as a motion suffix developed from adjectival appurtenance. Crucial about *-īna* is that it did not only derive forms which could (through ‘the one belonging to...’) refer to semantic females, but that these forms usually stood in contrast to a masculine counterpart (e.g. *rēgīna* as opposed to *rēx*). This suggests that the basis for semantic change in suffixes is not so much semantic change in individual lexical items, but rather semantic change leading to semantic *contrast* with other, related items. That is to say: if we have a word *a* and its derivative *b*, and the meaning of *b* is subsequently reinterpreted in such a way that it has a more straightforward semantic relationship to *a*, it is quite easy to reanalyse *b*’s suffix as a suffix which expresses that “new” relationship. This is especially easy to imagine for gendered pairs; as the difference between men and women is such a fundamental distinction in many aspects of the daily life of speakers, it makes sense that this contrast would be more prominent to their minds than an original, but more abstract appurtenance relationship. However, if *a* doesn’t exist (as is the case with for example **g^wenh₂-*, which has no related masculine form), there is no reason for speakers to create a new meaning for the suffix which would have derived *b* from such a non-existent base. Interpreting **-eh₂* as a feminine marker on the basis of **g^wenh₂-* without a related masculine is as if we would, on the basis of English *vegetable*, conclude that the suffix *-able* – which already exists, but with rather different functions – was a food suffix. Such a deduction would only be reasonable if we could compare the form to a hypothetical root ***veget-*, of which *vegetable* was the edible variant.

One interesting case study confirming the importance of such semantic contrast can be found in Kornexl (2006), which treats the history of the MoE feminine suffix *-ette*. It is by no means self-evident that this suffix would be interpreted as such in English, considering that it is borrowed from French, where it is primarily a diminutive (be it the feminine form). Nonetheless, *-ette* has shortly been productive as a female reference marker, forming nouns such as *usherette*, *majorette* and *munitonette* (the latter being relevant mostly in the context of the First World War).

It has often been assumed that an original diminutive meaning was the direct source of the feminine semantics of *-ette*, through a typologically common development from diminutive to feminine. However, Kornexl argues that this is unlikely. On closer consideration, it turns out that the development of *-ette* does not fit the typological model by Jurafsky (1996) very well, among other reasons because English hardly used the suffix as a productive diminutive. (Indeed, Jurafsky has to invent an additional model in order to use *-ette* as an example for his theory.) Instead, according to Kornexl, the first step towards the suffix’s feminine productivity was formed by “some established feminine designations ending in *-ette* that had entered English as borrowings from French”. These were earlier loans such as *brunette*, *coquette* and *soubrette*. The final impulse for the productivity of the suffix was its most famous instance, the likewise borrowed *suffragette*. As opposed to the earlier untransparent loans, *suffragette* was the first *ette*-derivative which could

be interpreted as not just female, but as the female counterpart of a male form: *suffragist*. This may have paved the way for analogical extension to other derivatives of male reference nouns, via what Kornexl calls the principle of “symmetrically structured gender pairs”. In other words, through its opposition to existing masculine nouns, *-ette* could become productive in words as *majorette* (from *major*) and *usherette* (from *usher*).

Of course, this is a loan situation, which might differ from the reanalysis of a ‘native’ suffix. Nonetheless, I think the history of *-ette* is an interesting illustration of how semantic contrasts – and especially male / female contrasts – can be a source of productivity, spreading the suffix to existing nouns through fourfold analogy. Existing nouns which contain the suffix might have a supporting function in its semantic reanalysis, but they do not necessarily lead to productivity by themselves.

4.4 Suffixes in personal names

On *-ette*, Kornexl also states that it “appears unlikely that the French-derived use of the suffix in female versions of male proper names such as *Antoinette* and *Paulette* triggered the new usage, though it may of course have had a supportive influence” (p.247). This is an interesting point for our research into the PIE feminine. After all, if the Anatolian evidence is reliable, we do also find a later feminine suffix – that is to say, **-ih₂* – in women’s names before we have evidence of productivity in its function as a motion suffix in other nouns. To what extent could personal names have influenced this later function or productivity?

The linguistics of personal names are not a frequently studied subject, among other reasons because names often refuse to obey the sound laws and analogical developments operating in the rest of the lexicon. For example, Spanish names such as *Carlos* retain the archaic nominative in *-s*, whereas other masculine words descending from Latin second declension forms rather end in *-o*, regularly derived from the accusative ending *-um*. Sometimes names even have several reflexes in later stages of the language; for example, OE *Æþelþryþ* is continued by its regular descendant *Audrey*, but also by archaising variants such as *Etheldreda* (and its shortened form *Ethel*).

Morpurgo Davies (2000) explains such cases by what she calls the ‘intentionality of naming’: as opposed to the rather unconscious nature of sound change, names are selected very consciously by speakers who are aware that the exact form of the name reflects social and cultural choices. Moreover, names are to a certain extent disconnected from the remaining lexicon of a language, in the sense that their form is often more important than their meaning. This is even the case in cultures where we find apparently meaningful names, such as the Greek compound names: some of these are made up of elements which are common as naming elements, but which do not make much sense from a semantic point of view. Solmsen (1922) gives examples such as *Λυσικριτός* (from *λύω* ‘to loosen’ and *κρίτός* ‘chosen’). He also refers to Aristophanes’ *Clouds*, in which a boy’s father wants to name his son after his own father *Φείδων*, whereas the mother prefers a name in *-ἵππος*; as a consequence, the child is named *Φειδιππίδης*, literally something nonsensical as ‘son of the frugal horse’. In short, even if personal names are formally similar or identical to meaningful lexical items, they tend to be treated differently.

Now Morpurgo Davies gives one example which is of particular interest to the question of the Anatolian names in $*-ih_2$. As said, Greek names are often formally compounds, many of which have a direct equivalent in the 'normal' lexicon. For example, next to the adjective θεόδοτος 'god-given' we also find the common personal name Θεόδοτος. However, there is one important difference. The adjective is a two-termination form. On the other hand, for the given name, we also find a feminine variant Θεοδότη attested. And this is not an exception: Morpurgo Davies gives some seven other secure examples. Moreover, cases such as Ξανθήπη are all the more interesting if we remember that the noun ἦτρος did not have a feminine form until relatively late in Greek. These feminine forms, on the other hand, must be old; at Mycenae, from the 2nd millennium BC, we already find the name *te-o-do-ra* (Θεοδώρα).

We could theoretically argue that the presence of this feminine $-ā$ in women's names, combined with its original absence in the rest of the lexicon, shows that the feminine suffix in nouns and adjectives was introduced from personal names. However, this would not make much sense in the broader context of the IE family: some other branches did not have names in $*-eh_2$ and developed the same nominal ending. Morpurgo Davies therefore settles on another explanation, namely that the ending was generalised in names earlier than in most of the remaining lexicon. The reason is that the interpretation of names – as opposed to other linguistic items – is often not supported much by context. A noun can be marked as feminine through the accompanying article or adjective; names, however, usually receive far less syntactic modifiers, especially when they are used to address someone. Moreover, for individual people, sex is often a more relevant piece of information than for an abstract concept or an animal (when not used for breeding). Even though the spread of feminine marking on names was part of the same development as the spread of marking on other nouns and adjectives, it happened faster on names, because there the feminine suffix carried more relevant information.

It may be clear that the situation in the Greek compound names is strikingly similar to the situation we find in Kanišite Hittite: a suffix which later shows up as a widespread feminine marker is in the earlier stages (nearly) limited to personal names. I am inclined to conclude that the same process of spread occurred in both languages: in other words, that $*-ih_2$ could already be used with feminine semantics in PIA, but that it was only marginally used – and therefore easily replaced by $-ššara$ – in the nominal lexicon, while it was retained somewhat longer in names, where it occurred more frequently. The feminine meaning of the suffix must then have developed outside of the naming system, even if it was not in widespread use.

4.5 Gender and suffix developments: a summary

We can summarise our conclusions in this chapter as follows:

1. Gender is primarily a system for reference tracking. We therefore expect new agreement to arise primarily around pronouns denoting categories for which separate reference is helpful in daily language use.
2. New genders can arise in roughly two ways: through new patterns of case marking (in which case we usually find no overt gender markers) or through the spread of a classifier or suffix from the noun to first the pronoun and then other modifiers (in which case there is overt marking in

the form of that classifier of suffix). The second scenario appears to be most applicable to the PIE feminine.

3. Words which are formally or semantically aberrant within their gender can either change their form or their semantics in order to fit better; they can also change gender. Words can also attract similar words or words with associated meanings into another gender. When a gender has received a large number of 'new' words, it may either change its core semantics or create a semantic subcategory.

4. Suffixes do not easily change their meaning; when they do, it may be due to a clear contrast between suffixed and unsuffixed forms, which can give rise to fourfold analogy and therefore productivity.

5. Personal names are separated to some extent from the rest of the nominal system, even if there is formal overlap. Due to the classifying, individualising function of names, suffixes with relevant semantics may spread quickly here even if the rest of the lexicon does not show the same development (at the same moment).

5. The emergence of the feminine gender in PIE

In the preceding chapters, we have discussed the linguistic situation in both PIA and PIE and seen some typological tendencies in gender and suffix development. We are then left with the core question of this study: can we explain, in a typologically sensible way, how the feminine gender came into being between the reconstructable stages of PIA and PIE?

In order to answer this main question, several problems have to be solved. What was the original semantic value of the feminine gender: did it start out as being feminine, or did it arise from a class of abstract nouns? How did especially **-eh₂* acquire feminine semantics? How did agreement first arise, and can we explain the peculiar distribution of **-eh₂* and **-ih₂* in the adjectival system? How should we account for the semantic and formal categories that eventually end up in the feminine gender?

Below I will suggest a new scenario for the development of the feminine gender in order to answer these questions.

5.1 The semantics of the third gender

The usual assumption in the literature is that the feminine gender was semantically feminine from the very beginning (e.g. Brugmann 1897, Tichy 1993, Litscher 2004). On the other hand, Luraghi (2009a) has also suggested that the gender rather started out as a category of abstracts, which was later reanalysed as a feminine (although with later modifications of the theory, see below).

Both options have their problems. Starting out with feminine semantics is clearly the simplest way of accounting for the eventual semantic value of the gender, but explanations along this line are usually very quiet on the significant number of feminine nouns which are neither semantically female nor marked by **-eh₂* or **-ih₂*, including many abstract nouns. How would these have ended up in the new gender? Moreover, there is the problem of the semantics of especially **-eh₂*. If it shows no signs of being a female reference marker anywhere in its history, then how would exactly this morpheme have ended up forming a feminine pronoun?

These two problems are less pressing if we start from an origin as an abstract gender. After all, it makes sense that most abstract nouns would have ended up here if ‘intermediate animacy’ was the original core characteristic of the gender; moreover, abstract semantics for **-eh₂* are securely attested in PIA. However, this scenario runs into typological problems. As described by Luraghi (2009b), languages with a three-gender system never have two inanimate genders, following the typological rule that a language never has more inanimate than animate genders. Moreover, I have not found any examples of a gendered language with a separate pronoun for abstracts: as noted in the previous chapter, genders are primarily means for reference tracking, and the semantic category of abstract nouns does not appear to be in urgent need of its own demonstrative.

Luraghi (2009b), in a modification of her original suggestion of an abstract gender, attempts to find a scenario in between these two possibilities. According to her, a “morphologically marked noun class” of abstract nouns arose in PIE, which was reinterpreted as semantically feminine and only then developed agreement (as this would have been typologically unlikely for an inanimate

abstract class.) She summarises the reconstructed process as follows (Luraghi 2011: 456, emphasis mine):

The new gender may have contained a majority of inanimate nouns (often abstract), but it became a gender only when it was motivated by sex. (...) It is pointless to look for a semantic motivation which may have caused the suffix **-h₂* to be reinterpreted as feminine: as argued in Luraghi (2009b), the morphologically motivated class of suffixed nouns was motivated semantically as feminine gender just because the sex parameter offered the only possible motivation for a third gender within a gender system such as that of early PIE.

Unfortunately, problems arise in two points here. The first is that the “morphologically marked noun class” of abstracts did, as far as I can see, not exist. There was a class of abstracts in **-eh₂*, that much is clearly true, but this did not encompass *all* PIE abstracts; e.g. the *i*-abstracts and *ti*-abstracts are left out. These different derivational types are in no way marked as belonging together until they are brought together in the feminine gender – which however, according to Luraghi’s explanation, happened only later. So either Luraghi simply means to say that the nouns in **-eh₂* were reanalysed as feminine – in which case we run into the same problems as with the ‘feminine-first’ explanations – or she is trying to formally connect the different types of abstract nouns without using the only formal connection there is, namely their membership to the feminine gender.

The second problem is an even more important issue of chronology, which is succinctly summarised by the underlined sentences in the cited paragraph above. Luraghi states that the feminine became a gender because it was motivated by sex – but also that the sex motivation arose because the feminine became a gender. In other words, the fact that it referred to natural sex caused it to become a gender, and the fact that it became a gender caused it to be interpreted as a sex referent. This is entirely circular. If both these statements are taken for the truth, neither a gender nor a semantic sex reference would ever have arisen, and PIE would have been left with a two-gender system, including several different types of abstract nouns with no closer grammatical relationship to each other.

We therefore seem to have reached an impasse. Neither the traditional feminine nor the abstract explanation can provide us with a likely development route for the new PIE gender. Of these two options, however, it must be noted that their problems are of a slightly different magnitude. An abstract third gender is, as a general concept, an unlikely phenomenon, no matter what suffixes or chronologies we involve in the reconstruction. A feminine gender, on the other hand, is typologically quite common, as seen with e.g. the South Dravidian languages in chapter 4; the problem here is only to account for the specific characteristics of this particular feminine. As that is at least a more favourable undertaking than reconstructing a gender with no attested parallels, it seems wisest to see if we can explain the feminine gender as we know it when we assume it was semantically feminine from the beginning.

5.2 The feminine suffixes

If we can go by the typological tendencies described by e.g. Greenberg and Corbett, it is most likely that the characterising suffix of the new gender first spread to the pronominal system, where it could be used to refer to female individuals. According to the usual reconstructions (e.g. Matasović 2004, Kim 2014), this first feminine pronoun was **seh₂*. But why would **-eh₂* have been chosen to form a new feminine pronoun if it had no meaning of female reference at any earlier point in the language?

As discussed in chapter 3, nearly all earlier functions of **-eh₂* have been taken as the starting point of a reinterpretation as feminine. We saw how several scholars have reconstructed the feminine as an offshoot of the collective: for example, Brugmann (1897) assumed that **g^wenh₂-* ‘woman’ was an original collective, which was reinterpreted as a singular and thereby triggered the genesis of a feminine gender. But even if **g^wenh₂-* was originally a collective – for which there is no evidence at all – it is unclear why a new singular in **-eh₂* should not simply have been integrated into the common gender (which contained the individuals in **-eh₂*) or the neuter gender (which likely included the abstracts in **-eh₂*). And as a source for a new feminine meaning of the suffix, a single word without semantic contrast does not suffice, as discussed in the previous chapter.

Equally problematic was Melchert’s suggestion (2014: 265) that **-eh₂* developed into a motion suffix from its earlier function as an individual suffix. As discussed in paragraph 3.2.5, it is hard to account for a feminine meaning, considering that the suffix mostly derives *male* individuals in the older stages of the language. The observation that forms with **-eh₂* are more marked than forms without it is not enough to explain a reanalysis as semantically feminine – not in the last place because the accompanying male forms are usually marked as well, namely with the thematic **-o*. Moreover, the importance of semantic contrast that we saw in paragraph 4.3 means that ‘more marked’ can only make sense as an explanation if there were also contrasting ‘less marked’ forms. In other words, we would need pairs of words – one with and one without the suffix – which could subsequently be interpreted as gendered pairs of which the form with **-eh₂* was the feminine. Melchert does not explain how such a pairing between unmarked and ‘more marked’ **-eh₂* forms would have come up.

All in all, I see no way to derive the female reference value of **-eh₂* from any of its earlier attested functions in PIA. By extension, it seems unlikely to me that the speakers of IE would settle on **seh₂* if the objective was to create a new female pronoun, which would logically be derived with an actual feminine suffix – comparable to e.g. **awal* with the suffix **-al* in South Dravidian. We would expect speakers to choose a suffix which was exclusively used for female individuals, rather than for men *and* women. After all, these suffixes *did* exist in PIE. Not only could **-sor* sometimes be used to refer to women (albeit as an archaism), **-ih₂* appears to have had feminine semantics already in PIA and could probably be used as a motion suffix early in PIE. In order to derive a feminine pronoun from a masculine pronoun, **-ih₂* would therefore be a far more obvious choice than **-eh₂*.

Now incidentally, it happens to be the case that we have evidence of a pronoun of the shape **sih₂* in PIE: it is attested as the 3sg. feminine pronoun in Germanic and Celtic (Go. *si*, OIr. *sí*), the enclitic feminine pronoun *sīm* in Sanskrit and the anaphoric / reflexive pronoun *ǐ* in Sophocles. It is sometimes said that **sih₂* was a reflexive pronoun in PIE (e.g. Hill 2012: 182), but that seems to be

based only on the single Greek attestation, and it is not clear to me why a reflexive pronoun would have developed into a personal pronoun in both Germanic and Celtic. The forms in these two branches have also been explained as the **s-* from **so* with the feminine **(h₁)ih₂* from **h₁e*, but it seems somewhat coincidental that this contamination would have occurred in two different branches, with exactly the same outcome; I prefer a regular development to an analogical process which occurred independently several times. I therefore consider it more likely that a feminine personal pronoun **sih₂* did exist in PIE. Indeed, Kortlandt (2017: 4) states that **sih₂* “was created as a feminine counterpart of **so* before the rise of **seh₂*”, and that it was replaced by the latter only at a later stage.

I think there are good reasons to consider the possibility that the feminine gender did not start with **-eh₂* as its characterising suffix, but with **-ih₂*. In the first place, this relieves us from the semantic problem: as opposed to **-eh₂*, **-ih₂* had already developed feminine semantics before the rise of the new gender. Moreover, **-ih₂* appears to have had the widest distribution of the two suffixes before they became confined to thematic or athematic stems: as we already saw earlier, cases such as **deǵu-ih₂-* to thematic **deǵu-o-* show that **-ih₂* could originally be found outside the athematic lexicon as well. If **-eh₂* was the original marker of the new gender and **-ih₂* was only introduced later for a specific formal subgroup, we cannot explain why it would replace **-eh₂* here, whereas it is understandable if **-eh₂* was only introduced later and did not manage to drive the original **-ih₂* out of core vocabulary items. Finally, the state in which we find **sih₂* in the attested daughter languages suggests to me that it was an archaism: especially in Greek and Sanskrit, the languages where we find reflexes of both pronouns, **sih₂* persists as a rather peripheral form next to the more successful **seh₂*. If **sih₂* had been created later than **seh₂*, that distribution would be hard to account for.

Note also that the other PIE demonstrative, **h₁e*, had a feminine form **(h₁)ih₂*. This pronoun is given far less attention in the development of the feminine, perhaps because it is attested in fewer daughter languages, but I think it is interesting that here we also see something suspiciously resembling the suffix **-ih₂*.

Finally, the form **sih₂* could perhaps account for another mysterious feature of the pronominal system, namely the oblique feminine forms with **si*, which we saw in paragraph 3.1.3. It is usually assumed that in formations such as dat. m. **tosmōi* vs. f. *tesǵeh₂ei*, the element **sm* corresponds to **sǵ̃*. However, if we assume the existence of a feminine **sih₂*, it is possible that the construction is actually **te-sǵ̃eh₂-ei*, with **sm* corresponding to **sieh₂*. Perhaps this form was included in the pronoun by analogy to the now male pronouns: if the concatenation of **so*/**to* and **sm-*, perhaps comparable to English ‘that one’, was still transparent to speakers, they may have needed a feminine alternative for the oblique cases of their new pronoun. However, the primary demonstrative with specifically feminine semantics at this point was exactly that new-formed **sih₂*, which could then have been added to the paradigms of both **so* and **h₁e*, thus ‘that (female) one’. The ablaut grade agrees with the proterodynamic inflection of **-ih₂* (Beekes 2011: 204), which gives a full grade in the oblique cases.

Clearly this suggestion needs to be considered in more detail to see whether we can indeed explain the full paradigm and its developments in the different branches from this starting point; such a study is unfortunately beyond the scope of this thesis. However, I think that the occurrence of an

element similar to **sih₂* so deeply embedded in the pronominal system may be additional reason to believe that the form is rather archaic.

Let us assume that the suggestion above, in which not **seh₂* but **sih₂* is created as a new female reference pronoun, is a viable scenario for the emergence of a new feminine gender. Could the rest of the gender's development be explained from this starting point?

5.3 The feminine lexicon

A feminine pronoun **sih₂* would originally have agreed exclusively with natural female reference nouns; this would evidently explain the occurrence of e.g. female family members and feminine animals in this gender. However, it is understandable that the scope of the new pronoun would widen quickly. I would suggest at least the following steps in the growth of the feminine lexicon:

1. Extension to abstracts in **-ih₂*. As we saw in chapter 4, genders are generally defined by formal characteristics as much as by semantics. Considering that **-ih₂* functioned as a motion suffix, quite some female nouns agreeing with **sih₂* would have had this form, such as **deǵu-ih₂* 'goddess' and **h₂reh₁ǵnih₂* 'queen'. Moreover, the fact that the pronoun itself contained the suffix would automatically suggest some link with nouns derived in the same way. These factors could straightforwardly have led to the inclusion of other **ih₂*-nouns in the new gender – mostly abstracts, as reflected in e.g. Skt. *śáci* 'might' and OE *nytt* 'utility'. These might in number even have been roughly equal to the female reference nouns already included.

2. Extension to other abstracts. The shift of a significant number of abstract nouns to the previously exclusively feminine gender would constitute an 'invasion', in Corbett's terms, which could easily lead to the creation of a semantic subgroup within the gender. Similar nouns would then also have been attracted into the new category. The extension may have started with the abstracts in **-eh₂*, which were beside semantically similar also nearly identical from a formal point of view. From there on, abstracts in e.g. **-i* and **-ti* could have followed.

3. Expansion of **-eh₂*. Considering that **-eh₂* is very productive as an abstract suffix in several IE daughter branches, it stands to reason that it was quite prolific in this capacity in PIE as well. As a consequence, through the functional similarity of **-ih₂* and **-eh₂*, the feminine gender was now invaded by a substantial amount of nouns in **-eh₂*. Combined with the aforementioned formal similarity with **-ih₂*, this may even have brought speakers to conclude that **-eh₂* was identical to **-ih₂*; that is to say, that they were allomorphs of the same gender marker, and that the new gender was therefore characterised by **-eh₂* as much as by **-ih₂*. Below I will discuss some considerations suggesting that this was indeed the case. In any way, the numerous **eh₂*-nouns in the feminine lead to a next link in the chain effect of the gender's expansion, bringing in other forms in **-eh₂* such as concrete nouns and collectives reanalysed as singular. Note that the masculine agent nouns in **-eh₂* remained in the masculine gender for semantic reasons.

4. Inclusion of other formally similar nouns. For example, it seems well possible that non-abstract *i*-stems (e.g. **h₃eǵ-i* 'sheep') were included on the basis of their abstract relatives. Note that by now the feminine gender is no longer as sharply defined as it originally was: there are two important semantic cores, namely female reference and abstracts, which both attract less typical

nouns to their gender through formal similarities. This blurs the larger picture, leading to the first instances of what Corbett calls semantic residue. The hazier semantic definition of the gender also makes it easier for new, non-typically feminine words to come in.

Some other categories may have shifted to the feminine anywhere in this tentative chronology. For example, the class of small and harmless animals (Matasović 2004: 93) may have been considered more feminine due to cultural notions of women being less dangerous than men. The assignment of small animals to the feminine was perhaps helped by analogy after animal kinds of which male and female were distinguished; there the often larger and stronger male would obviously stay masculine, whereas the female would become feminine in gender.

Similarly, cases such as **h₂e_usōs* ‘dawn’ and **nok^{wt}-* ‘night’ may perhaps have been feminine because IE religion personified them as female. Of course, there is a high risk of circularity here: it is just as well possible that they were personified as such because they were grammatically feminine. Another explanation, with less inclination to be circular, is that for these words individual ‘pull-factors’ were at work: for example, **nok^{wt}-* may have become feminine by association with **louksneh₂-* ‘moon’, which would already have shifted because of its formal features. Here the problem is that we cannot possibly determine for every feminine word what may have been its route to the new gender. (This problem remains the same if we start out with **seh₂* rather than **sih₂*; then cases as **nok^{wt}-* can still only be guessed at.) For this reason, I think we should not strive to explain every single case in the feminine gender. The most important question is whether we can account for the bulk of words in this category – which I believe this chronology can do.

5.4 Adjectival agreement and a distribution between **-ih₂* and **-eh₂*

The theory outlined above explains the creation of a female pronoun agreeing with a specific set of nouns and the expansion of that noun class. However, agreement in the feminine gender did not exist only on the pronoun. We also find it in the adjective, with a rather specific distribution between the two suffixes involved. So how could this be explained?

Interestingly, it is likely that both **-eh₂* and **-ih₂* were found in the adjectival inflection before the rise of the feminine. **-ih₂* probably started as an adjectival appurtenance suffix: that is to say, before **de_iu-ih₂-* meant ‘goddess’, it was presumably an adjective meaning ‘belonging to heaven / a god’. There were probably also adjectives in **-ih₂* which had not substantivized. Now, with a pronoun in **-ih₂* showing agreement with nouns in **-ih₂*, I think it is fairly reasonable to expect that such adjectives would be analysed as belonging to the feminine gender as well. This would perhaps be stimulated by the lack of a sharp distinction between noun and adjective in PIE. Often words could be used as both; if some feminine nouns in **-ih₂* were also used as adjectives, the link between these and the new gender would be even stronger.

Slightly more complex is the case of **-eh₂*. As discussed in paragraph 2.2.5 **-eh₂* was one of the several suffixes in PIE of which the function had split between denoting exocentric abstracts and endocentric individuals. The endocentric meaning – i.e. ‘the X one’ – then had a tendency to be re-adjectivised, similarly to the process we see occurring in the Germanic weak adjectives (e.g. **raudan-* ‘red one’ (cf. Lat. *Rūfōn-* ‘red man’) > ‘red’, e.g. Go. *þana raudan fugl* ‘the red bird’;

Nussbaum 2014: 305). It is therefore well possible that singular adjectives in **-eh₂* did – in modest numbers – already exist before the rise of a third gender, although they did of course not have feminine semantics yet. It may have been these re-adjectivised forms which formed the starting point for the occurrence of **-eh₂* in the feminine adjective (Nussbaum 2014: 306; Fellner and Grestenberger 2016: 19-20). It is also likely that the collective adjectives in **-eh₂* played a supporting role. If some collectives were reanalysed as feminine singulars, the fact that they already agreed with matching adjectives might have stimulated the spread of **-eh₂* as an adjectival suffix as well. Note that both explanations are similar to those given for the Lycian feminine-like agreement that we discussed in paragraph 2.1.1: the formal similarity of different endings in the nominal system can, when brought together somehow, easily lead to a situation resembling agreement.

For the reinterpretation of **-eh₂* as an agreement suffix, however, it seems necessary that **-eh₂* was by this time seen as a characteristic marker of the feminine gender as much as **-ih₂*. After all, since **-eh₂* did not have feminine semantics, the link between these adjectives and the feminine gender can only have been based on formal features. Here I must come back to the point I already shortly mentioned in the previous paragraph: the relationship between the two suffixes at this point. I believe we have reasons to assume that, at least to the speakers of PIE, **-ih₂* and **-eh₂* were at some point interpreted as two forms of the same gender marker. For this assumption I have two important arguments. Firstly, as far as I have been able to find during my typological research, a gender is generally characterised by *one* suffix: it is after all one suffix or classifier which spreads between different parts of speech and links them together. A gender with two core suffixes – one of which spreads to some adjectives, another of which spreads to other adjectives – is to my knowledge rather unusual. Secondly, there is a complementary distribution to the two suffixes, especially in the adjectives. If two morphemes with the same meaning and similar form occur in a mutually exclusive distribution, they function effectively as allomorphs – which, by definition, means that at least synchronically they are considered one and the same morpheme.

I think it is quite imaginable that when abstracts in both **-ih₂* and **-eh₂* flooded the feminine category, the close formal similarity of these two suffixes lead to ‘unification’ in the minds of the speakers. Of additional help may have been that we already see a rudimentary distribution between the two suffixes here. Both can form abstracts to verbal stems and adjectives. For the first category, I have not been able to find a distributional difference, but the deadjectival abstracts are significantly more interesting. As pointed out in paragraph 3.2.3, **-eh₂* is only used to derive abstracts from *thematic* adjectives. For **-ih₂* it is harder to establish what its original domain was; by far most reconstructable cases are derived from verbal stems, and it doesn’t help that the suffix (as *-ia*) became quite productive for both thematic and athematic adjectives in Greek. However, the examples that we can securely reconstruct for PIE are all athematic as far as I have been able to find. For example, Lat. *aciēs*, Gm. **agjō-* ‘edge’ is derived from the *u*-stem adjective **h₁ek-u-* ‘sharp’ and OCS *bratrija*, Gr. φράτρία ‘brotherhood’ from **b^hreh₂tr-* ‘brother’. Even if this was not the case for all *ih₂*-abstracts, an athematic majority may, combined with formal and semantic similarities, already have been enough to enable a reinterpretation in which these two suffixes were seen as respectively the thematic and athematic variant of the same suffix. I think it is in any

case likely that this distribution started in the abstract nouns: nowhere else do we find the two suffixes so similar in semantics, combined with the striking thematic range of **-eh₂*.¹⁴

In the adjectival system, this same distribution could have been continued. This would have been driven especially by, again, the distribution of **-eh₂*, which was in its endocentric meaning also exclusively thematic (Fellner and Grestenberger, 2016). For the adjectives in **-ih₂*, we cannot reconstruct a similar limited distribution, but this is exactly what we would expect: after all, we had already concluded that **-ih₂* originally occurred in a wider part of the lexicon, and that it was limited to the athematic adjectives by the spread of **-eh₂* in the thematic declension. In other words, it seems probable that the thematic / athematic allomorphy which started in the abstract nouns was continued into the adjectives, where at least **-eh₂* showed the same range of use.

5.5 The spread of **-eh₂*

The chronology of developments above describes how, even if the feminine gender was in its first stages characterised by the motion suffix **-ih₂*, formal and semantic similarities with **-eh₂* could create a situation in which these two suffixes could function as allomorphs of the same gender marker. This situation may have had consequences for the semantics of **-eh₂*. After all, if **-ih₂* is a feminine suffix, and **-eh₂* is now considered to be the same suffix as **-ih₂*, **-eh₂* must logically *also* be a feminine suffix for especially thematic nouns. This reinterpretation may well have been supported by the existence of e.g. **g^wenh₂*- ‘woman’ and **h₁uid^he₂eh₂*- ‘widow’. These forms alone were probably not enough to bring about the semantic change of **-eh₂*, but now that **-eh₂* as a feminine marker on adjectives was contrasted with masculine forms, they may have been a supportive influence on the reanalysis – comparable to the role that *brunette* and similar forms may have played in the productivity of English *-ette*, as described in paragraph 4.3.

In principle we might also expect to see the opposite development, i.e. the transfer of functions from **-eh₂* to **-ih₂*. However, I think it is explainable that we do not necessarily see this happen. The endocentric function of **-eh₂* was always limited to thematic nouns and therefore gave little opportunity for a ‘takeover’ by the ‘athematic allomorph’. The collective in **-eh₂*, moreover, was no longer productive as a derivational suffix, and as an inflectional ending it was probably no longer directly associated with the suffix, considering its different grammatical status.

The most direct consequence of the ‘merger’ of the two suffixes might therefore have been that **-eh₂* took over part of the other suffix’s role as a marker of the feminine gender, and hence of female reference. New feminine forms for thematic nouns could therefore now receive this suffix, e.g. **h₁ek_u-o-* ‘horse’ → **h₁ek_u-eh₂-* ‘mare’. Only some old feminines from thematic nouns in **-ih₂*, especially those in the core vocabulary, were retained. As we know that the class of thematic nouns was expanding in PIE, the group of nouns marked by **-eh₂* may have grown quite rapidly as well. For example, the word for horse was still an athematic *u*-stem in Anatolian, cf. HLuw. *ásu-* ‘horse’; no feminine is attested here, but considering the attested distribution we would expect a PIA formation in **-ih₂*. However, when the Core IE languages created a thematic stem **h₁ek_u-o-*,

¹⁴ Luraghi (2009a) suggests that **-eh₂* was limited to the thematic declension because the **-e-* was taken as a theme vowel. Considering that the suffix showed ablaut – as opposed to the thematic **-o-* – this seems very unlikely to me.

this also implied the creation of a new form in $*-eh_2$. Such a spread of the suffix may have been the reason for its later prominence in some daughter languages, such as Latin. On the other hand, even in Latin we see that $*-ih_2$ is continued in many athematic forms; for example, the suffix *-tor* still has a feminine equivalent *-trix* < $*-tr-ih_2-$.

The complementary distribution which had developed may also have been the reason for a later change in the pronoun. The reconstruction above is based on the suggestion that not $*seh_2$ but $*sih_2$ was the first pronoun with female reference. However, the masculine form of this pronoun was $*so$. As soon as a system was established in which $*-eh_2$ formed feminine equivalents to every word with a theme vowel, whereas $*-ih_2$ was only employed in cases without an $*-o$, the pair of $*so \sim *sih_2$ must have looked rather irregular to speakers. An analogical construction $*seh_2$ solved this problem; $*sih_2$ would then have been pushed into more limited uses. Similarly, the adjectival $*kwo-$ formed a feminine $*kweh$. Note that $*-eh_2$ was not used for the other feminine demonstrative, $*(h_1)ih_2$: the masculine equivalent $*h_1e$ did not look thematic, and therefore did not trigger this analogical replacement.

It is even possible that the creation of $*seh_2$ occurred quite late in the history of PIE; that is to say, after some branches had already split off. As noted before, TochAB *sā* < PT $*sa$ cannot to be the regular outcome of $*seh_2$, as this would have been PT $*sā$. From a preform $*seh_2$, the attested form is hard to account for; matters become easier, however, if we assume PT $*sa$ is rather the reflex of $*sih_2$. According to Fellner (2014: 14 fn.22) this is phonetically possible but unlikely on comparative grounds; however, as we have seen, $*sih_2$ does actually make for a fine reconstruction based on no less than four other branches. Del Tomba (2020: 210) assumes the initial consonant would be palatalised by a following $*i$, but suggests that that it may have been restored in analogy with the non-palatalised masculine. In either case, the Tocharian pronoun may well have been $*sih_2$ in origin.¹⁵ Moreover, the branches where we certainly find $*sih_2$ as the primary 3sg. feminine personal pronoun are Germanic and Celtic, often assumed to be the first branches to split off after Tocharian (e.g. Ringe et al. 2002). Unfortunately we have no reflexes of either $*seh_2$ or $*sih_2$ in Italic, so we cannot be sure if it was an Italo-Celtic feature, but there is no evidence of the opposite either. The branches where $*sih_2$ only occurs as an apparent archaism next to $*seh_2$, Greek and Indo-Iranian, are among the latest branches to split off according to Ringe's reconstruction.

With the replacement of $*sih_2$ by $*seh_2$, these last branches would have reached the stage of the gender which is commonly reconstructed: semantically feminine, characterised by $*-eh_2$ in the thematic inflection and by $*-ih_2$ in athematic forms, agreeing with the pronouns $*seh_2$ (for $*so$) and $*(h)ih_2$ (for $*h_1e$), and containing female reference nouns, abstracts, and words which were either formally or semantically linked to these two categories.

5.6 The PIE feminine gender: a summary

The development sketched out above may be summarised as follows:

¹⁵ Note, also, that a pronoun $*sih_2$ could perhaps have stimulated the Tocharian spread of $*-ih_2$ through the entire adjectival system, including the thematic declension, at the cost of $*-eh_2$.

1. PIE speakers created new pronouns to refer to women, by taking the masculine (hitherto generally animate) pronouns and suffixing these with the feminine motion suffix $*-ih_2$. This resulted in the forms $*sih_2$ and $*(h_1)ih_2$. A typological parallel can be found in the South Dravidian languages, see paragraph 4.1.
2. The range of nouns agreeing with the new pronouns expanded through both semantic and formal similarities, especially to abstract nouns. These ‘newcomers’ in the feminine gender included many abstracts in $*-eh_2$, which were derived from thematic adjectives. Parallels for such gender expansion can be found in paragraph 4.2; a particularly interesting illustration is Afro-Asiatic, where semantic feminines and abstracts have also been brought together in one gender because they are both marked with the suffix $*-t-$.
3. The semantic and formal similarity of $*(e)h_2$ and $*-i(e)h_2$ as abstract suffixes led to them being interpreted as two forms of the same suffix. The first was already limited to thematic adjectives, the latter occurred mostly with athematic adjectives; as such, they could be reanalysed as allomorphs for these two subsets of the feminine lexicon.
4. The same distribution was continued into the adjectival declension, where $*-eh_2$ was already present in re-adjectivised endocentric derivatives from thematic stems. As a consequence, $*-ih_2$ – which knew a wider distribution deriving appurtenance adjectives – was limited to the athematic declensions, save some petrified remainders such as $*deju\text{-}ih_2$.
5. Since $*-eh_2$ was now used as a marker of feminine adjectives, contrasting with masculine forms, it was reinterpreted as a motion suffix comparable to $*-ih_2$. This semantic shift was supported by existing nouns in $*-eh_2$ with female reference semantics, such as $*g^w enh_2$. A comparable case is the reinterpretation of English *-ette* as discussed in paragraph 4.3.
6. Finally, the synchronic connection between masculine $*-o$ and feminine $*-eh_2$ led to the replacement of $*so \sim *sih_2$ by $*so \sim *seh_2$ (possibly only after the departure of Tocharian, Italo-Celtic and Germanic). The pronoun $*h_1e$, which did not make a very thematic impression, kept its original feminine $*(h_1)ih_2$.

6. Summary

In the above, I have discussed the relevant grammatical elements in both Proto-Indo-Anatolian and Proto-Indo-European in order to see what features already existed before the creation of a feminine gender, and what features likely postdate it, and can therefore not have played a role in its development. On the basis of the situations in PIA and PIE, I have suggested a scenario which could bring us from the first to the latter, taking typological tendencies into account.

The most important difference between PIA and PIE is, of course, the emergence of an entirely new gender: whereas PIA consistently shows a bipartite split between common and neuter, in PIE we find an additional feminine gender, which is characterised by the suffixes **-ih₂* and **-eh₂* and contains words from both the earlier common and neuter gender. Feminine agreement in PIE is visible on pronouns, adjectives and numerals, although in all these categories we also find forms which retained their two-way distinction until after PIE had split up; in other words, the new gender had not yet spread throughout the entire nominal system.

As we have seen, both feminine suffixes already existed in PIA. Of these, **-eh₂* is attested best, in a wide range of functions: the suffix derived abstract nouns, concrete nouns and individual nouns, and moreover functioned as an inflectional suffix to form collectives. The other relevant suffix, **-ih₂*, is quite scarcely attested in Anatolian: we only find it as a female naming suffix in Kanišite Hittite. In PIE, the uses of **-eh₂* have not changed much; the most important innovation is that it can now be used as a feminine suffix on thematic stems. For **-ih₂*, more functions are attested than in Anatolian: it marked the new feminine on athematic stems, but could also be used as an abstract suffix and an appurtenance suffix.

In the existing literature, **-eh₂* is often assumed to be the original and primary feminine suffix. However, it is hard to account for a feminine value from its other attested meanings: a collective or abstract origin relies on unlikely semantic shifts, and a development from an individual suffix used for men and women to a feminine motion suffix is unlikely if the language could also make use of existing, exclusively feminine suffixes. On the other hand, **-ih₂* is attested with feminine meaning already in Anatolian. I therefore propose to start the reconstructed development of the feminine gender with this suffix instead: **-ih₂*, not **-eh₂*, was used to derive the feminine pronoun **sih₂*, as attested in Germanic, Celtic and perhaps Tocharian.

Through both semantic and formal association with the original feminine *ih₂*-nouns, other categories entered the new gender, most importantly other forms with female reference and abstract nouns. The latter category brought in a large amount of nouns derived with **-eh₂*. As a consequence of the formal and semantic similarity between this suffix and **-ih₂*, combined with the rudimentary distribution of thematic vs. athematic nouns found in the abstract domain and the adjectival system, these two suffixes were interpreted as allomorphs; the feminine meaning of **-ih₂* was therefore transferred to **-eh₂*. Due to the prolificacy of the thematic declension, the associated suffix **-eh₂* became more and more prominent, eventually replacing **-ih₂* even in the pronouns when the corresponding masculine looked thematic.

The scenario summarised above can solve some long-standing questions on the origins of the PIE feminine. It shows how a feminine gender could come to be characterised by a suffix with no original feminine semantics (without resorting to typologically unlikely reconstructions such as

an abstract gender), and accounts for the remarkable distribution between $*-eh_2$ and $*-ih_2$. As an additional advantage, it offers an explanation for the unexpected feminine pronouns in Celtic, Germanic and Tocharian that does not depend on the coincidence of independent parallel analogies in several branches.

A few assumptions must be made, too. An important role is played by the women's names in $*-ih_2$ found in Kanišite Hittite; although I think it is likely that this reconstruction is correct, we must keep in mind that the suffix is not widely attested and that the material from which we draw our conclusions is therefore quite minimal. If one were to dispute the reliability of this source, that leaves the scenario above still equally well possible, but less securely substantiated. Furthermore, some conclusions depend on the completeness of typological information. If we were to find a language with an abstract gender, for example, that might make scenarios based on $*-eh_2$ more likely.

Further research on especially the relationship between $*-eh_2$ and $*-ih_2$ could shed more light onto the development of these two suffixes through time. An interesting question is how exactly both function as motion suffixes and adjectival suffixes in the different branches. The standard distinction of thematic vs. athematic is mostly based on Sanskrit and Greek, but we find aberrant cases in earlier branches; above, I already gave the Germanic example of Go. *þius* 'servant' < $*teu_2-$ and *þiwi* 'female servant' < $*teu_2ih_2-$, suggesting that $*-ih_2$ may still have been in wider use at the time Germanic left the homeland. Examining such cases in more detail was not possible within the scope of this study, but may be a valuable addition to the data discussed above. Similarly, a further study of the pronominal system of PIE – especially in the oblique cases – may give us more information on the prominence of $*-ih_2$ and perhaps other suffixes in this stage of the language.

In absence of such additional data, I believe the scenario outlined in chapter 5 is a more realistic explanation for the emergence of the feminine gender in PIE than traditional theories revolving around the suffix $*-eh_2$. Further investigation of the occurrences of especially $*-ih_2$ may give us a more detailed picture of the role the suffix played in the developments within the PIE gender system.

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