# The Germanic Dental Preterite:
# A Morphological and Semantic Examination

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# Abstract

The weak dental preterite is one of the defining features of the Germanic verbal system and is an innovation of the Germanic branch of Proto-Indo-European. This paper aims to examine the likelihood of a Proto-Indo-European construction as the origin of the dental preterite and if any of the relationship between morphology and semantics found in Proto-Indo-European was inherited into the old Germanic languages. This paper follows the periphrastic construction theory and while the reason the imperfective *dhe* was utilised remains unclear, this paper will show that as the Germanic languages developed they reached a point where the relationship between form and function became opaque. The weak dental preterite's function was broadened to be used as a safeguard against further verb system change resulting in the Proto-Indo-European deverbal and denominative verbs no longer being the only weak verbs.

## Declaration

I, Elizabeth Phoenix, declare that the dissertation 'The Germanic Dental Preterite: A Morphological and Semantic Examination' is my own original and authentic work except where acknowledgements are made to referenced literature. None of this dissertation has been previously submitted to qualify for an academic degree.

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# 1  Introduction

The Germanic languages constitute one of the more well-researched branches of the Indo-European language family, whose specific linguistic traits have been discussed for hundreds of years. One particularly important topic is that of the dental preterite. The preterite tense itself, when discussed in regards to the Germanic languages, is often referred to as a 'simple' past tense as it is a periphrastic verb structure for the past tense, as opposed to a compounded verb structure such as the pluperfect, often also referred to as the 'perfect past' in Modern English, which consists of a past participle of the main verb as well as a form of auxiliary verb. One of the fundamental distinctions between Germanic verbs are the classifications of strong and weak and this affects how they form their tenses; while the strong verbs form their tenses through the use of vowel change, a change referred to as ablaut, the weak verbs are of the most concern for this paper as they are the verb grouping which, for the most part, does not utilise ablaut and uses the dental suffix to form their preterite.

The Germanic verb system remains particularly distinct from those of related languages as the structure of the verb system as 'weak' and 'strong' is a Germanic innovation. Furthermore, these weak and strong verb classes often contain overlap in regards to the verb types found within them, such as transitive or reflexive, leading to a more complex system than would perhaps at first be imagined.

Additionally, when referring to the Germanic verbal system, there are a number of terms that are in common usage but are often detrimental to understanding as they are either not fully explained or are similar enough to terms used for other languages that their specific relevance can be lost; for example, the perfect and the stative refer to the same aspect while imperfect and imperfective do not. Beyond this, a number of older academic articles in German use terms

which are no longer in use in modern German academia, either due to a Latinate word usurping a Germanic one or vice versa.

Furthermore, there is the distinction between primary and secondary verbs with primary verbs being a classification which can be firmly associated with reconstructed Proto-Indo-European predecessors; these verbs contain a form of ablaut and are predominantly strong verbs, such as the class IV strong verb 'to bare' stemming from Proto-Indo-European *$b^her$ 'to carry'.[1] On the other hand, secondary verbs most often fall into the derived verb classification and are mostly believed to have come into common usage after a number of Proto-Indo-European verbal systems had already broken down and fallen out of use and were being replaced; therefore, these secondary verbs are predominantly weak verbs and, so, gained the dental preterite in question. In regards to the primary verbs, they are not found only in the strong verb classification; the preterite-present verbs were initially a rather standard class of strong verbs but as their present tense form was lost over time, what was their preterite became their present and so that became the stem and also gained the dental preterite suffix to form their new preterite, with Ringe proposing that nine, and arguably a tenth, of the preterite-present class can be traced back to Proto-Indo-European perfects.[2] In terms of secondary verbs, they stem largely from derivative verb classes, the predominant two of which are denominal and deverbal, with the first indicating verbs derived from nouns and the latter referring to verbs derived from other verbs, both often using suffixes to produce the new form. Of the deverbal class, one of the most common forms, making up a large portion of the Class i of weak verbs, is the causative class, referring to verbs causing an action or a change of state. Also falling into the deverbal category are iterative and inchoative verbs, denoting a repeated action or the beginning of an action, state, or occurrence respectively. These specific derivative verb types are of most relevance to

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[1] Ringe, Donald. *From Proto-Indo-European To Proto-Germanic*. 2nd ed., Oxford University Press, 2017, pp. 47.
[2] Ibid., pp. 178; Salmons, Joseph. *A History Of German*. Oxford University Press, 2012, pp. 71.

the discussion regarding the dental preterite as they have been previously identified as amongst

the first to utilise what would become the weak preterite construction.[3]

| denominative | | to hammer, to classify, to victimise |
|---|---|---|
| deverbal | causative | to raise, to lay, to seat |
| | iterative | to chatter, to rattle, to flicker |
| | inchoative | Only survived in Gothic and partially in North Germanic[4] |

**Figure 1.1** *Derivative verb types with Modern English examples where applicable; this list is not exhaustive.*

In terms of the Proto-Indo-European verbal system, as opposed to being structured around

tense as the majority of modern Indo-European languages are, it was structured around aspect

with three distinct aspect classes marked by modifying the root, typically through ablaut.

However, each verb did not necessarily have a form in each class. The aspect classes were the

following: the perfect, also sometimes referred to as the stative, which was used to describe a

state of being; the aorist, sometimes referred to as the perfective, which was used to describe

an entire or completed action or without discussing something in too much detail; and the

imperfective, sometimes referred to as the present, which was formed to describe a durative or

continuous action or something described in a greater amount of detail. Ringe provides the

following examples of reconstructions for each verb type: the perfect *wóyde '(s)he knows'; the

aorist *bʰúHt 'it became'; and the imperfective *gʷm̥sḱéti '(s)he is walking'.[5] The former are the

traditional terms used and the latter are contemporary suggestions. The discrepancies between

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[3] Sverdrup, Jakob. *Zum Germanischen Verbalsystem*. (n.p.), 1928, pp. 37.
[4] Ball, C. J. E.. "THE GERMANIC DENTAL PRETERITE." *Transactions of the Philological Society*, vol. 67, 1968, pp. 166.
[5] Ringe, 2017, pp. 27-28.

the use of these terms does not only rely on the age of the text but also the personal preferences of the author; a number of contemporary books and articles still use the traditional names (such as Ringe) as these are the terms most widely recognised within Proto-Indo-European language research. However, the varying names can pose issues for those beginning their research as different sources often do not clarify which naming paradigm they will be working under. The reasoning behind the effort to change the terms used was to bring more cohesion to discussion of language aspects overall as the 'perfect' can often be confused with 'perfective', which is how the aorist is now referred to when teaching languages that still have aspect forms, such as Russian, but the terminology has not been universally accepted. Terminology being changed in regards to languages is not uncommon and has even affected the German preterite as in some cases for lower level language learners it has been referred to as the 'imperfect past' which causes difficulty as other languages, such as French, have an imperfect past that has not been mislabelled as is the case with German 'imperfect'. In this paper, the traditional terms of perfect, aorist, and imperfective will be used.

To thoroughly analyse the development of the Germanic dental preterite beyond only the construction and possible origins within the verbal system, especially in regards to the Proto-Indo-European *dhe*, previous theories of its origin will be discussed as well as the wider context of the Proto-Indo-European verbal system and potentially related structures found in other Proto-Indo-European languages. Furthermore, outlying Germanic structures, mainly reduplication and the *-þ* ending, will also be discussed to provide greater context for how the construction may have developed and become widespread.

## 2  Discussion of the History of the Dental Preterite

The largely accepted timeline for preterite development from Proto-Indo-European into the older Germanic languages is that it originated as a distinct tense form within one of the three aspect stems and originally utilised ablaut, reduplication, and personal endings in its construction. While Proto-Germanic maintained the personal endings, the preterite formation moving into the Proto-Germanic era retained predominantly only the ablaut and reduplication, the latter also eventually being lost, surviving only in records of Gothic and partly in Old English (example surviving reduplications include Gothic *slepan < saislep* and Old English *hātan < heht*). However, the dental preterite is exclusively found in the Germanic language family and this uniqueness as well as the extensive study of Germanic language origins has led to much research around this particular facet. The weak Germanic preterite is formed by a dental suffix being affixed to the stem of the weak verb, also utilising endings indicating person and number where necessary. However, while personal endings are often levelled through sound changes in daughter languages, even then there are not as many endings utilised with the Germanic preterite as would probably be expected.

The debate regarding the origins of the dental preterite remains an important one and also a point of contention between Germanic language theorists as there is no convincing evidence of it in what can be reconstructed of Proto-Indo-European as well as no indicator of it or a distinctively similar system in neighbouring language branches. It is a 'new' system that was most probably introduced or modified from an existing system, possibly as a support mechanism as other Proto-Indo-European systems broke down and became obsolete moving into the Proto-Germanic era. This will be discussed at greater length in subsequent sections.

Questions regarding the origin of the dental preterite were first raised in the early 1700s by Stade who proposed the initial periphrastic construction theory but,[6] while important groundwork was done through the 18th and into the 19th centuries, it was Collitz in the early 1900s who truly reinvigorated the debate surrounding the formation as he did not come to the same conclusions.[7] Collitz questioned possible constructions that could have led to the situation we see today and what influences on the language would have resulted in its construction and continued use. Due to his in-depth analysis and evaluation of the main periphrastic construction theory that had come before, his work is often used as a basis for modern research into the topic and as a good starting point for those who have an interest in Germanic language history as he also reviews older works before explaining his own beliefs and explanations. Following this, there have been subsequent critical analyses which have helped to solidify the dental preterite debate in even modern academia. Similar to Collitz, Must also provides a firm starting point for research, covering the major theories and theorists, especially due to the English translation by Roy F. Fallis Jr. which was produced when the majority of Germanic language academic literature was still produced in German making Must's work more accessible to those who may not understand German. However, Must makes his own beliefs quite clear as, despite praising theorists for raising important questions regarding the periphrastic construction theory, he does also make sure to note that many attempts to derive the dental from a Proto-Indo-European *-t- have found little support and do not explain the construction to a satisfying result.[8] Ringe's analysis stems more from an assessment of Germanic language evolution overall and provides extensive detail and previous research to support claims that he makes in his works.

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[6] Must, Gustav. "The Origin of the Germanic Dental Preterit". *Language*, vol. 27, no. 2, 1951, pp. 121.
[7] Collitz, Hermann. *Das schwache Präteritum und seine Vorgeschichte.* Vandenhoeck & Ruprecht, 1912.; Ibid, pp. 121.
[8] Ibid, pp. 124.

In short, the theory that was put forward by Stade, and largely accepted with a few notable exceptions, was that the dental preterite originated in Proto-Indo-European as a periphrastic construction containing a verb form and a form of *dhe, meaning 'make', which was eventually contracted through haplology into the suffixed ending observed in the old Germanic languages[9] and the reduplicated syllable in the *dhe form was also lost. As the Germanic weak preterite is so distinctive in morphology and sound compared to other past-tense markers in the Indo-European language family, the majority of research into it has, rightfully, been based on the phonology, what could result in the sound produced. However, less attention has been given to which verb types were possibly used in the initial construction and why these may have affected the construction or been affected by other verb systems through the Germanic period. The first suggestion of what the verb stem may have been came from Hirt who suggested it would have been an indefinite verb.[10] It is also helpful to mention Loewe's theory of how the *dhe form became affixed through haplology as, while he did not offer any substantial theories regarding the forms within the construction itself, his theory of haplology through the Proto-Germanic period is predominantly accepted by those who also accept Stade's theory.[11]

As the basis of the theory stemmed mostly from analysis of phonology and phonological reconstructions, this led to a number of opportunities to question the origins of the preterite. One of the first critics of the periphrastic construction theory was Begemann in 1873 who proposed the theory that the dental originated not in a periphrastic construction but instead in a Proto-Indo-European past participle construction containing the element *-to-.[12] While his theory did not gain as much support as Stade's, due to his inability to explain inflectional endings,[13] the

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[9] Ibid, pp. 122.

[10] Ibid, pp. 121.; Hirt, Hermann. *Indogermanische Grammatik*, vol. 4. Winter, 1928, pp. 98.

[11] Ibid, pp. 121.; Loewe, Richard. *Germanische Sprachwissenschaft*, vol. 2. Walter de Gruyter, 1924, pp. 81.

[12] Ibid, pp.122 ; Begemann, Wilhelm. *Das Schwache Präteritum Der Germanischen Sprachen*. Berlin: Weidmannsche Buchhandlung, 1873.

[13] Ibid, pp.122.

idea of questioning the monolithic belief about the origin of the periphrastic construction had now been established leading to other theorists researching into what they believed to be the origin, with many of them looking to Proto-Indo-European *-t- elements to explain the construction. Collitz theorised that it was the 1st and 3rd singular verb forms of the Proto-Indo-European middle perfect that were the true origin of the dental preterite due to them containing the element *tai-. While his original work remained important in terms of the history of theorised origins, his own origin theory did not become as popular as Stade's and was disputed by Sverdrup who will be discussed at greater length later.[14] Brugmann also developed a theory regarding the origin of the dental preterite in the early 1900s which concluded that, in a similar way to Begemann's view, the dental preterite stems from a Proto-Indo-European *-to- but that it is from a present verb formation, as opposed to a past participle, that became a Pre-Germanic preterite. However, this theory also found little recognition and support amongst other theorists.[15] Finally amongst notable periphrastic construction detractors is Hammereich who also offered substantial reasoning by which to critique Stade's original theory as he showed that, while there were a number of preterites in the older Germanic languages which could be linked to a Pre-Germanic -t-, none could be sufficiently linked to a Pre-Germanic -dh-.[16] However, like others before him, he failed to gain traction with his own dental preterite origin explanation which suggested that the origin was a nominative agent-noun form coupled with the present tense of 'to be'.[17]

Ringe and Sverdrup both operate under the belief that the dental preterite originated within a periphrastic construction and their research has formed a large basis of this work. Ringe is by

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[14] Ibid, pp. 121.; Sverdrup, 1928.
[15] Ibid, pp. 121.; Brugmann, Karl. *Grundriss der vergleichenden grammatik der indogermanischen sprachen*. K. J. Trübner, 1897.
[16] Ibid, pp. 123.; Hammerich, Louis Leonor. "Det Germanske Svage Præteritum". *Arkiv För Nordisk Filologi*, vol 38, Lund: Lund University, 1922.
[17] Ibid, pp. 123.

far the most recent commentator on the topic discussed thus far and, similar to Collitz and Must, provides a firm foundation for studying the Germanic languages and their history, not only in terms of phonology and the formation of the dental preterite but as a whole, moving from Proto-Indo-European into Proto-Germanic and onwards.[18] Ringe's discussion of the languages' development includes in-depth research into the Proto-Indo-European verb system allowing for study into which verbs acquired the dental preterite and why this may have been as well as providing research into the Germanic verb system as a whole. While subscribing to the periphrastic construction theory, he does differ from other theorists as, along with Rasmussen,[19] he believes that the original construction would not have originated in the Proto-Indo-European perfect stem but would have instead originated in the imperfective stem coupled with a participle, a form of *dhe*.

The relevant articles by Sverdrup are, by contrast, far less contemporary but remain the basis for certain areas of research around the dental preterite that have stayed relatively untouched.[20] As well as offering criticism of Collitz's theory, Sverdrup also talks about the phonology of the dental preterite as well as providing some of the first in-depth considerations regarding the morphology and what structures could have existed in Proto-Indo-European to lead to the necessary circumstances whereby the form of *dhe* would become a suffix.[21] His theory stemmed from the belief that the denominative and deverbative were the initial verbs to be part of the construction with a form of *dhe* which was then contracted into the dental preterite observed in the old Germanic languages.[22]

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[18] Ringe, 2017.
[19] Ibid, pp. 192. ; Rasmussen, Jens Elmegård. *"On The Origin Of The Germanic Weak Preterite"*. *Copenhagen Working Papers In Linguistics*, vol 4, 1996.
[20] Sverdrup, 1928.
[21] Ibid., pp. 15.
[22] Ibid., pp. 37.

When discussing the verb system as a whole as opposed to only focussing on discussions of the dental element, a form of timeline of the Proto-Indo-European family separation is necessary as identifying the form of verbal systems present in other language branches can help to identify when certain languages split away and what language changes occurred before and after this split. Ringe uses a 'family-tree' diagram[23] to help to further explain the basis of his own theories and which parts of Proto-Indo-European he believes to have survived into the form of the language that would eventually become Proto-Germanic. This results in a more effective analysis of what can be known and understood about this reconstructed language.

Sverdrup and Ringe both operated under the same belief and offer the most concise and clear evidence in terms of which verb types could have appeared in the periphrastic construction. However, despite their research and critiques of other theories, there appears to be little consensus regarding which verb types the construction may have originated with as most discussion is still focussed on the origin of the dental itself.

In his overview, Must partially misrepresents Sverdrup by oversimplifying his approach; while Sverdrup makes a point to differentiate between the denominal and deverbal verb types analysed, Must only refers to the causative in terms of the deverbal category.[24] It must also be noted that Sverdrup is one of only two researchers Must cites looking into which verb classes the periphrastic preterite phrase originated in and, while Must offers a good groundwork for a number of theories, this oversimplification results in this important facet of the debate becoming little more than a footnote lost amongst discussion of phonological disagreements.  Must begins by praising Sverdrup for his service to the periphrastic phrase theory and accurately condenses his thoughts regarding which verbs should be used as the primary research focus as Sverdrup

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[23] Ringe, 2017, pp. 7.
[24] Must, 1951, pp. 121.

believed the secondary verbs held greater potential for rational explanation than the primary verbs.[25] However, when referring to the verb types that fall into the secondary verb classification, Must references only the 'denominate and causative' in parentheses[26] while Sverdrup in his original work references 'Denominativa und Deverbativa (Kausativa, Iterativa und Inchoativa)'[27] with all three of the latter verb types found in the deverbative class being specifically referenced. By condensing these verb classes down into simply causative, Must simplified the relation between the deverbative classes and seemingly relegated the iterative and inchoative class to simple subclasses of causative rather than distinct verb classes of their own. This proves detrimental to research into this area as when questioning why certain verbs were first used for this periphrastic construction, a key part would appear to be their verb class and what these verbs are used for; while causative is a large group of verbs, it is not worth disregarding other classes which also hold distinct uses and meanings that need to be studied in order to understand why the denominative and deverbative verbs gained this construction.

One of the recurring problems with studying the Germanic preterite is the personal endings and the relative lack thereof in comparison to other verb forms and what would be expected from the preterite. However, as with other aspects of the preterite, the forms these personal endings would take are also debated, partly due to the debate surrounding the origins of the dental suffix.

The differing beliefs concerning the origin of the dental lead to different reconstructions based on what is known about Proto-Germanic phonological and morphological changes. In a similar fashion to Sverdrup, Friesen also looked to the secondary verbs to isolate the origins of the dental preterite and subsequently proposed a series of endings reconstructed for

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[25] Must, 1951, pp. 121.
[26] Ibid.
[27] Sverdrup, pp. 37.

Proto-Germanic.[28] However, while Friesen did believe that the secondary verbs formed their preterite initially by periphrasis,[29] he also considered that all dental preterites stemmed from a Proto-Indo-European *dh,[30] some also containing *t, and was the first to propose this theory as opposed to all dentals stem from *t with some containing *dh which came before him. Beyond this, Friesen theorised that those preterites which did not contain a vowel between the stem and the affix, referred to as a 'union vowel', must have formed their preterites with a *ti- or *tu- suffix.[31] Both Sverdrup and Must disagreed with Friesen, not only due to the periphrastic construction theory, claiming that Friesen's ending reconstructions were linguistically unlikely.[32]

More recently, Tops critically reassessed and built upon Friesen's approach, proposing his own Proto-Germanic endings shown in **Figure 2.1**.[33] Tops proposes that the suffixes *ti- and *tu- were utilised but the periphrastic phrase consisted of the perfect form of *dōn. In his thorough examination and breakdown of Germanic language development, Ringe also discusses the preterite and proposes his own Proto-Germanic endings. However, while Ringe supports the periphrastic construction theory he does not agree with Friesen regarding the Proto-Indo-European *ti- and *tu- nor does he support Tops' theory regarding the perfect form of *dōn. Ringe continues to support the older theory that the periphrastic construction was formed with the imperfective *dhe and, so, based his Proto-Germanic ending reconstructions upon this, shown in **Figure 2.1**.

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[28] Friesen, Otto von. *Om Det Svaga Preteritum I Germanska Språk*. Uppsala: Almqvist & Wiksell, 1925.
[29] Tops, Guy, ed. Frisiak, Jacek. "The Origin Of The Germanic Dental Preterit: Von Friesen Revisited". Recent Developments In Historical Phonology, vol 4, 1978, pp. 351.
[30] Friesen, 1925 ; Ibid.
[31] Ibid, pp. 353.
[32] Sverdrup, 1929, pp. 23 , Must, 1951, pp. 122.
[33] Tops, 1978, pp. 357.

|  | Tops (1978) | Ringe (2017) |
|---|---|---|
| 1st sg. | *dedōm/dedēm | *dedēn |
| 2nd sg. | *dedōs/dedēm | *dedēz |
| 3rd sg. | *dedōþ/dedēþ | *dedē |
| 1st pl. | *dedōm | *dēdum |
| 2nd pl. | *dedōþ | *dēdud |
| 3rd pl. | *dedōn | *dēdun |

**Figure 2.1** *Theorised Proto-Germanic weak preterite endings as proposed by Tops (1978) and Ringe (2017).*

As shown in **Figure 2.1**, both sets of theorised endings contain a reduplicated *-de-* and some similarities in form regarding vowels, consonants, and stress placements due to them needing to line up with what we know of the weak preterite in the old Germanic languages. However, the different theorised origin for each set is also noticeable where they do differ.

Sverdrup made significant headway in regards to examining which verb types and categories were part of the periphrastic construction and also proposed which verbs were most likely first to acquire the ending. However, he also noted that when differentiating between the verbs it is worth being aware that 'primary' verbs have a preterite that cannot be traced back to Proto-Indo-European and it is unlikely that there will ever be any satisfying conclusion regarding

them.[34] Friesen also believed that the secondary verbs held answers to the origin of the dental preterite but Must believes the reconstructed Proto-Germanic forms he suggested to be improbable according to what is known about Germanic linguistics.

As has previously been shown and emphasised, the majority of theorists since the conception of the periphrastic construction theory have been predominantly concerned with the dental suffix itself whether that be the origins of it or how it reached the form we see in the old Germanic languages. For the majority of proposed theories, it is simply stated that a 'verb form' gained the dental element, whether that be from a Proto-Indo-European *-t- or a form of *dhe, with little consideration for which verbs were the ones to initially form the construction and that is what this paper will explore.

Somewhere in research regarding the dental preterite a line must be drawn regarding what is Germanic language research and what is research into Proto-Indo-European. This distinction may offer an explanation as to why the verb system that resulted in the suggested periphrastic construction origin of the preterite has been largely left vague in discussions of the preterite origins. While theorists may not have believed that the verb system of Proto-Indo-European was overly relevant to their discussion of the preterite in old Germanic languages, for example, it remains that linking research between Proto-Indo-European and Germanic has remained rather niche with many theorists seemingly choosing one side to research but not tying it into the other language to a satisfying degree beyond the phonological aspects.

As the Proto-Indo-European verb system was far more complex, perhaps the question of which verbs were part of the construction has not been discussed to such a great extent as there is less certainty in these discussions. A major factor that must not be forgotten in regards to

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[34] Must, 1951, pp. 121-122; Sverdrup, 1928, pp. 15; pp. 17.

Proto-Indo-European language theory and research is that the language is purely reconstructed and has no written sources resulting in difficulties, as very little can ever be known for certain about the language. In particular, having three verb forms (perfect, aorist, and imperfective) raises difficulties as some verbs are only reconstructed with only two of the three forms and whether this is due simply to that being the structure of that particular verb or because they have not been reconstructed yet results in uncertainties that can undermine theories. In some ways, studying the dental element is the safer option and is also more grounded as evidence of it is a lot clearer in the old Germanic languages than the distinction between verb forms, most of which went through great changes in the transition to the Proto-Germanic period resulting in identical forms or absorption into other verb systems, for example.

In comparison to phonological analysis of the dental preterite, less has been done solely from a morphological or semantic standpoint. Reassessing research through these lenses will offer comparisons and possible explanations that have perhaps been previously overlooked.

This paper will be operating within the framework of the periphrastic construction theory as it offers the most persuasive evidence in terms of a logical and probable origin for the dental preterite and also allows for questions regarding which verbs were initially part of these constructions and why them specifically. Despite being the oldest origin theory, the periphrastic construction theory continues to be the most compelling due to subsequent research about it; through the theory of haplology[35] and comparisons to certain Greek constructions involving the aorist case[36] as well as relations to Sanskrit which is also documented to have formed tenses through periphrastic constructions,[37] the precedent of periphrastic constructions in Proto-Indo-European languages as useful bases for new ideas has already been established so

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[35] Hirt, 1928, pp. 98.; Loewe, 1924, pp. 81.
[36] Must, 1951, pp. 121.
[37] Ringe, 2017, pp.191.

the idea that Proto-Germanic would rely on such a form is not one that can be easily disregarded. From reconstruction and comparison theory, it is possible to see that the Proto-Indo-European verb system was incredibly different to even that of the old Germanic languages and that through the later Proto-Indo-European period and the Proto-Germanic period rather drastic changes had already occurred and were still having lasting effects on the languages. Such changes suggest that it would be very possible for a tense construction to emerge as a supporting system and then survive, even if the system it was originally supporting eventually dies out.

In terms of why this is still a topic worth researching and evaluating, many questions do still remain about the dental preterite even excluding the specific origins of the actual dental element that originally spurred on the discussion. Previous research has shown that it is possible to at least theorise about the verb types that would have been included in the construction despite how certain systems will have overlapped and merged with others. Research into the verbs that were part of the construction is worthwhile to pursue not only because it has been largely untouched by the majority of theorists writing about the dental preterite but also because it may provide some insight into how Proto-Germanic was used by its speakers and firmly establish linguistic links between what we know about the old Germanic languages and what can be deduced about Proto-Indo-European. These links will provide a more thorough understanding of the timeline of change and possible explanations of why the languages developed in the way that they did.

# 3 <u>Morphology</u>

## 3.1   <u>Proto-Indo-European Verb Structure</u>

In order to understand the development of the dental preterite, the Proto-Indo-European verbal system and its subsequent breakdown must first be examined. In the following section, a general picture of the late Proto-Indo-European verb system will be established and a number of significant changes in regards to the Germanic verbal system will be discussed in order to provide a broader view of the situation of Germanic at the time and how the dental preterite would have been able to firmly establish itself in such a climate.

Languages belonging to the Indo-European language family are now spoken all over the globe but Proto-Indo-European, as a supposed singular language, is believed to have been spoken around eight thousand years ago in the locale of the Ukrainian steppe.[38] The diversification of Proto-Indo-European into the languages used today is still an uncertain area of discussion but there appears to be a general consensus that Anatolian and Tocharian were the first two languages or language sub-groups to separate, both of which have no living languages descended from them.[39] While other language subgroups and surviving texts of Anatolian and Tocharaian languages can help to reconstruct older aspects of Proto-Indo-European, the Germanic languages are part of the Central Indo-European subgroup meaning the majority of changes that make the Germanic languages distinct would have originated far later than when Anatolian split away.

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[38] Ringe, 2017, pp. 5.
[39] Ibid., pp. 6.

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                   /    \
                  /      \
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                /          \
          ANATOLIAN      NUCLEAR IE
                         /      \
                        /        \
                  TOCHARIAN    CORE IE
                              /      \
                             /        \
                            /          \
                      ITALO-CELTIC   CENTRAL IE
                       /      \
                      /        \
                     /          \
                  CELTIC      ITALIC
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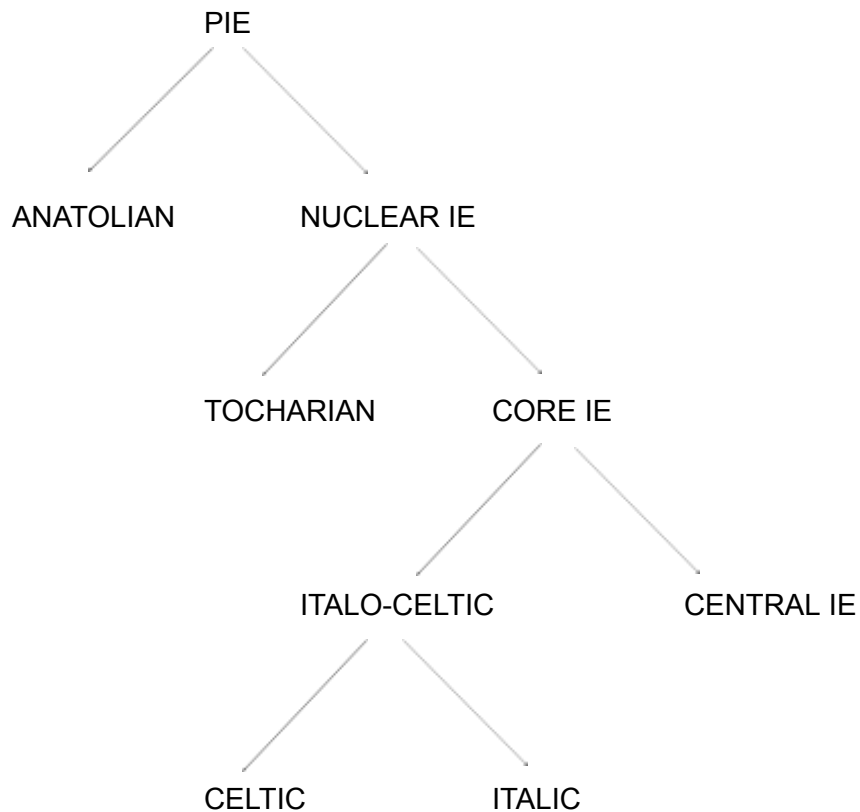
**Figure 3.1** *A possible cladistic tree of the Indo-European language family.*[40]

The study of Proto-Indo-European, even the study of its separation, must first address that

Proto-Indo-European is not documented and has been reconstructed from what is known about

old Indo-European languages, such as Latin or Gothic, through the comparative method.

Fortson introduces language comparison by acknowledging that some similarities between

languages are simply due to chance, some are borrowings between languages, and some are

language universals, such as baby-talk, sound-symbolism, and onomatopoeia.[41] When

comparing languages, a large enough group of data must first be gathered and compared.

Fortson uses the word for 'teeth' in Spanish, Italian, French, and Portuguese to demonstrate

how deviations are filtered out from the reconstructed form when there is no evidence to

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[40] Ibid., pp. 7.
[41] Fortson, Benjamin W. *Indo-European Language And Culture*. Wiley-Blackwell, 2010, pp. 1.

indicate they are the original form; the example given looks at the *e* following the initial *d-* and how it is more likely Spanish changed to the diphthong *ie* than the other languages all changed from a diphthong to *e*.[42]  From here, the comparison moves forward with the predominant systematic correspondences.[43] These groupings are correspondence sets and the words within them are deemed cognates. For a reconstruction to be viable, similarities across multiple correspondence sets must be found and analysed to see if they are of any real worth and recurrent enough across multiple sets to deduce that they would have existed in the proto language. Without this regularity of sound correspondences, Fortson suggests that comparative linguistics would be almost impossible.[44] It was only with Sanskrit coming to the attention of western scholars that brought about the theory that Latin was not derived from Greek but rather they are 'sisters' with Sanskrit also being related.[45] In the 18th Century, scholars were becoming more aware of language families and that there must have been an older language they descended from, and even brought Gothic, Celtic, and Persian into the equation with Greek, Latin, and Sanskrit as other possibly related languages and so research into, and reconstruction of, Proto-Indo-European began in earnest.[46]

When reconstructing Proto-Indo-European it must also be remembered that these reconstructions can only provide a small snapshot of what the language could have looked like at a certain point in time and Fortson claims that Proto-Indo-European reconstructions can only produce an idea of Proto-Indo-European that existed around eight thousand years ago and most estimates of the age of Proto-Indo-European are around six thousand years[47] meaning that any perception of Proto-Indo-European that we have is not complete in terms of possible

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[42] Ibid., pp. 4.
[43] Ibid., pp. 4-5.
[44] Ibid., pp. 4.
[45] Ibid., pp. 9.
[46] Ibid., pp. 9.
[47] Ibid., pp. 13.

developments over time or dialects, for example While this age is only an estimate, DNA and archaeological evidence of that time appear to support the Ukrainian Steppe hypothesis meaning Proto-Indo-European would have most likely been spoken around that area around that time.[48] Furthermore, certain languages are documented in specific areas at specific times giving certain time constraints to the development of Proto-Indo-European and the daughter languages;[49] while absolute chronology is virtually impossible to achieve, it is important to know at what times certain changes possibly became widespread and how this influenced the language family as a whole.

Ringe's reconstruction of the Proto-Indo-European timeline, as detailed in **Figure 3.1**, ties into this as his reconstructions are proposed for the Central-Core-Indo-European period as opposed to a period before Anatolian split away. However, a number of other reconstructions do not consider timing as a factor and propose reconstructions for a far older Proto-Indo-European. Even then, this can be tenuous or difficult as these reconstructions are one snapshot of an undocumented language with the proposed forms being able to fall anywhere from at least six to eight thousand years ago. Of course there are issues and gaps within the field of Proto-Indo-European reconstruction as it is unlikely there will ever be written evidence of Proto-Indo-European uncovered; this means nothing is truly known for certain especially in regards to syntax which remains one of the more readily debated areas[50] but also pronunciation as the Indo-European languages have not always been recorded with writing systems that accurately reflect the phonology of the language.[51]

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[48] Ringe, 2017, pp. 5.
[49] Ibid.
[50] Fortson, 2010, pp. 153.
[51] Ibid., pp. 14.

It is important to note when looking at the earliest stages of reconstructable

Proto-Indo-European that it is theorised that Anatolian may have separated from the parent

language while certain structures were still developing forms that would later become to be

regarded as part of its 'classical' look.[52] Examples of this include the distinct lack of aorist in

Anatolian,[53] but still having present stems that can be linked to cognates in other languages, as

well as thematic stems being incredibly rare or even non-existent,[54] depending on which theory

is to be believed. All of this would suggest that the complexity of the 'classical' look of

Proto-Indo-European would only develop after the Anatloian branch had already split away.

While Szemerényi talks about Hittite and its minimalist system it must also be noted that Hittite

was likely used as an example as it is the best attested of the Anatolian languages; however,

that does not mean that it is exceptional when compared with other Anatolian languages as

these also demonstrated a more minimalist verbal system with a less complex inflectional

system but retained the complexities observed in noun structure.[55]

The minimalist system of Anatolian has brought into question the standard reconstructions of

Proto-Indo-European as certain elements found within later languages and are expected to

appear in Proto-Indo-European are absent. While Szemerényi puts this down to some amount

of loss in the Anatolian branch and that Proto-Indo-European was far more complex as shown

by the noun system,[56] Ringe believes that Proto-Indo-European was not as complex as believed

but nor was it as minimalist as the Anatolian languages.[57] However, Fortson proposes the idea

that the reason for the more minimalist forms in the Anatolian branch is that the more complex

forms expected of Proto-Indo-European had simply not developed yet and only came about

[52] Ibid., pp. 171.
[53] Ibid., pp. 173.
[54] Ibid., pp. 173.
[55] Ibid., pp. 180-182.
[56] Szemerényi, Oswald John Louis. *Introduction To Indo-European Linguistics*. Clarendon Press, 2007, pp. 231.
[57] Ringe, 2017, pp. 25; 31-32.

after the Anatolian languages had already split from what would be Core Indo-European.[58] It is worth noting that older theories regarding Anatolian placed it as a sister language to Proto-Indo-European and both languages were descended of Indo-Hittite; this theory was suggested by Sturtevant but has since fallen out of favour as more was learnt about both languages.[59]

When considering the Proto-Indo-European verbal system, it is important to remember that it has been pieced together through research mostly using the comparative method. This means that the largest parts of Proto-Indo-European are assembled through comparing older texts of various Indo-European languages and attempting to reach a consensus regarding at least phonology, morphology, and syntax by 'reversing' changes in the descended languages that are confirmed to have occurred.

Szemerényi presents a formula for structuring verb conjugations based primarily on the Greek verb system. He suggests that, in the majority of cases, the tense stem is followed by the element indicating mood, and is then suffixed with the personal ending. This ending may be preceded by a thematic vowel.

| thematic | athematic |
|:---:|:---:|
| St + M + Th + E | St + M + E |

**Figure 3.2** *Szemerényi's formula for structuring verb conjugations.[60]*

However, it is not as simple as a consensus regarding what features appear in the majority of Indo-European languages as some languages, such as Anatolian, may have split away far earlier and contain the only evidence for a structure that existed in Proto-Indo-European but did

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[58] Fortson, 2010, pp. 171.
[59] Ibid., pp. 172.
[60] Szemerényi, 2007, pp. 232.

not survive into Central-Indo-European and, so, is not present in languages descended from that specific branch. Furthermore, there are issues that arise with the reconstruction method given the differences between verb systems in the descended languages and determining what is inherited and what is innovated; Szemerényi gives the examples of Greek, Old Indic, Gothic, Lithuanian, and Hittite and their voices, moods, and tenses to show this and raises the discussion of whether the maximal or minimal systems are more likely to be Proto-Indo-European or whether they originated only in certain branches.[61]

|            | *Voices* | *Moods* | *Tenses* |
|------------|----------|---------|----------|
| *Greek*     | three    | four    | seven    |
| *Old Indic* | three    | four    | seven    |
| *Gothic*    | two      | three   | two      |
| *Lithuanian*| one      | three   | four     |
| *Hittite*   | two      | two     | two      |

**Figure 3.3** *The number of voices, moods, and tenses of Greek, Old Indic, Gothic, Lithuanian, and Hittite.*

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[61] Szemerényi, 2007, pp. 231.

|  | Active | Middle | Passive | Medio-Passive |
|---|---|---|---|---|
| Greek | ✔ | ✔ | ✔ | |
| Old Indic | ✔ | ✔ | ✔ | |
| Gothic | ✔ | | ✔ | |
| Lithuanian | ✔* | | | |
| Hittite | ✔ | | | ✔ |

**Figure 3.4** *The voices of various Indo-European languages.*

*Szemerényi lists Lithuanian as only having one voice;[62] however, Lithuanian would actually appear to have a fully formed active voice and a reduced passive voice in two subcategories, present participle and past participle.

|  | Indicative | Subjunctive | Optative | Imperative | Injunctive |
|---|---|---|---|---|---|
| Greek | ✔ | ✔ | ✔ | ✔ | |
| Old Indic | ✔ | ✔ | ✔ | ✔ | ✔ |
| Gothic | ✔ | ✔ | | ✔ | |
| Lithuanian | ✔ | | ✔ | ✔ | |
| Hittite | ✔ | | | ✔ | |

**Figure 3.5** *The moods of various Indo-European languages.*

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[62] Ibid., pp. 230.

| | Present | Imperfective | Future | Aorist | Perfect | Pluperfect | Future perfect | Preterite | Conditional |
|---|---|---|---|---|---|---|---|---|---|
| *Greek* | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | | |
| *Old Indic* | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | | | ✔ |
| *Gothic* | ✔ | | | | ✔ | | | | |
| *Lithuanian* | ✔ | ✔ | ✔ | | | | | ✔ | |
| *Hittite* | ✔ | | | | | | | ✔ | |

**Figure 3.6** *The tenses of various Indo-European languages.*

Szemerényi states that Proto-Indo-European must have originally had a more maximal system as nouns reveal an older and richer system than what is sometimes observed through the verbal system alone.[63] Through special consideration of Latin and Greek and what remnant systems can be identified within them, Szemerényi comes to the conclusion that the Hittite situation must in fact be impoverishment and proposed the following as provisional categories of the Proto-Indo-European verb:

| *Voices* | *Moods* | *Tenses* |
|---|---|---|
| Two: active and middle | Four: indicative, subjunctive, optative, imperative | Three to six: present, aorist, perfect and perhaps also future, imperfective, pluperfect |

**Figure 3.7** *Szemerényi's provisional Proto-Indo-European verb categories.*

Also in describing the Proto-Indo-European verb system, Szemerényi comments that the present and the aorist both occupy a similar position in terms of uses in the verbal system while the perfect stands far more apart.[64]

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[63] Ibid., pp. 231.
[64] Ibid., pp. 231.

However, Szemerényi does not define what point of Proto-Indo-European he is attempting to define and, so, Ringe's assessment of Proto-Indo-European contradicts what Szemerényi claims. Ringe believes Nuclear Indo-European contains the same four moods as those Szemerényi listed but theorises that Proto-Indo-European pre-Anatolian division was unlikely to have contained the indicative and imperative moods as any evidence of the subjunctive and optative is absent from the Anatolian languages.[65] While Szemerényi did address Hittite specifically and how its minimalist system must be an innovation due to the complexities of the noun system, this does somewhat conflict with what Ringe believes as it would suggest that, while Proto-Indo-European may have been a more maximalist system than the Anatolian languages, it may not have been as complex as Szemerényi claimed given that two moods may not have been present in its verb system.[66]

This is another issue faced when examining the reconstructed verb system of Proto-Indo-European. Researchers will often not give a timeline for when they are placing their reconstruction; this may produce different results depending on the researcher as one may have included the Anatolian languages while another did not, for example. Ringe is incredibly useful in the explanation of the systems here given that he places his theories within the timeline of Proto-Indo-European and how language families diverged rather than providing reconstructions with no clear timeframe.

Ringe goes on to discuss how the aorist and present fell together leading into the Germanic period.[67] Leading on from the strong presents being formed by Indo-European perfect stems, the perfect and aorist indicative came into competition with the perfect seeming to 'win out' and

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[65] Ringe, 2017, pp. 28.
[66] Ibid., pp. 25; 28; 31-32.
[67] Ibid., pp. 181-182.

Ringe goes as far as to claim that he cannot reliably attribute any reflex in the Germanic languages to the aorist indicative. Furthermore, during the development of Proto-Germanic, the distinction between perfect and imperfective aspects was lost and, had the aorist indicative yet to fall out of use, would have also brought it into competition with the imperfective.[68] However, whether the aorist indicative was still in use or not during the period where the distinction between perfect and imperfective was lost is inconsequential as the end result remains the same and that is that almost all of the Proto-Indo-European imperfectives were also lost in Germanic with only *$d^heh_1$ ('put' which subsequently shifted to 'make' and then 'do') surviving.[69] This is important to note as the imperfective *dhe is believed to be the foundation of the dental in the weak verb preterite and, due to this, would be a logical survivor as it would have been regularly needed and in use.

However, in opposition to Ringe's belief that there are no remnants of the aorist in the Germanic languages, Sverdrup believed there are some identifiable traces of aorist in the second person preterite indicative of the strong verbs in West Germanic.[70] Sverdrup indicates that the widely accepted theory of the strong verbs stemming from the Proto-Indo-European perfect had resulted in theorists overlooking certain aspects which did not line up and which could only be explained as the strong verbs actually stemming from a mixture of both perfect and aorist.[71] While Ringe discusses how the aorist and perfect fell together during the late Proto-Indo-European period,[72] his research suggests that this was less a mixing of two verb systems to create a separate new formation but rather a conflict and the aorist faded from use meaning that, in this case, there would be no aorist to pass on into the Germanic strong verbs as Sverdrup claims. However, Fulk also believes there to be evidence of aorist reflexes in

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[68] Ibid., pp. 182.
[69] Ibid.
[70] Sverdrup, 1928, pp. 313-314.
[71] Ibid., pp. 330.
[72] Ringe, 2012, pp. 181-182.

Germanic due to a particular verb type only securely attested to in Indic and Germanic;[73] this verb type has a weak grade root meaning that it does seem to reflect what could have been a zero grade present. Examples of this type are found across the strong verb classes but Class V and VII examples are generally insecure; a brief list of examples includes Class I *būgan* 'bend' (Old English), Class II *molka* 'milk' (Old Icelandic), Class III *murnan* 'mourn' (Old English), Class IV *trudan* 'tread' (Gothic), and Class VI *skaban* 'shave' (Gothic).[74] Fulk does briefly discuss that this verb type is debated to even exist in Proto-Indo-European and even proposes the possibility that the verb types listed as representing this aorist present may be later innovations but, regardless, does suggest verbs in a number of classes which may actually be indicative of an aorist reflex surviving into Germanic.

As previously defined, Proto-Indo-European, in all forms, had three verb aspects referred to as the aorist, the perfect, and the imperfective. However, in some literature concerning Proto-Indo-European, researchers will seemingly use tense and aspect interchangeably. While both categories are directly linked to verbs and indications of time, a grammatical aspect indicates how an action, event, or state extended over a period of time while a grammatical tense typically indicates the time period of an action in relation to discussing it or in relation to another action taking place. In somewhat reductive terms, aspect can be seen as concerned with the action and its state of completion, the 'how' of an action's completion, while tense is concerned with the time in which an action took place. While Szemerényi offers great insight into different branches of Indo-European with his comparisons between voices, moods, and tenses, he does not distinguish between tense and aspect when listing what each language contains. For example, in **Figure 3.6** and **Figure 3.7** the data in the tables was presented by Szemerényi but he does not separate tenses and aspects and, instead, lists them all as tenses

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[73] Fulk, R. D. *A Comparative Grammar of the Early Germanic Languages.* John Benjamins Publishing Company, 2018, pp. 263.
[74] Ibid., pp. 264.

which is why Proto-Indo-European is listed as 'three to six' as there are three agreed upon aspects but the addition of tenses into the discussion is a great deal more complicated. Ringe discusses the progression of Indo-European into Nuclear Indo-European after the Anatolian language split and the reorganising of the Proto-Indo-European aspect structure. Here, he discusses tenses within aspects as if aspects are the larger categories which tenses can be fitted into rather than tense and aspect being equals in opposition to each other. The example of the imperfective aspect having both a present and past tense that can be reconstructed is given.[75] Part of the difficulty in defining certain facets of Proto-Indo-European is that the system was in a state of change when developing into the daughter languages and these developments were not a simple or streamlined process; by showing the tenses within an aspect, as if the aspect is the overarching category, it can help to show from where certain tenses may have originated but it is not as simple as saying a certain aspect developed into a certain tense. The present tense stems of the imperfective often had a stative meaning but the perfect case also provided a separate formation for stative verbs.[76]

In the initial stage of Proto-Indo-European, before the Anatolian split, verbs had stems that carried aspect and were inherently perfect, imperfective, or aorist; the reorganising of the system following the Anatolian split and leading into the Nuclear Indo-European period lead to verbs having two or three stems that could be altered for aspect instead.[77] In his examination of the Proto-Indo-European verb system and how it developed into the recognisable old Germanic languages, Salmons discusses the stative, or perfect, verbs and their formation and which verb types they subsequently became. He asserts that the perfect is the basis of the preterite and that some perfect verbs have survived into Germanic languages predominantly as modals or

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[75] Ringe, 2017, pp. 27.
[76] Ibid., pp. 28.
[77] Ibid., pp. 27.

preterite presents and can be identified by their perfect paradigm endings.[78] Ringe also

identifies the perfect, as he refers to it, as the origin of the strong verbs.[79] Salmons goes on to

discuss verb classes in relation to weak verbs and their forms, each of which is defined as

correlating to a certain verb type in the Germanic languages.[80] Weak verbs were a later

innovation within the verbal system.[81] Class i weak verbs and strong verbs display a single

pattern while class ii and iii weak verbs show another.

| *-jan-* | causatives | - causes someone or something to do or become something<br>- causes a change in state |
|---|---|---|
| *-on-* | denominatives | - derived from nouns |
| *-en-* | duratives | - continued over a period of time, short or long durations |
| *-non-* | inchoative | - process of beginning or becoming |

**Figure 3.8** *The relationship between affix and verb type.[82]*

As can be seen from **Figure 3.8**, three of the four verb types align with those identified by

Sverdrup as being the most likely to have initially formed the periphrastic preterite

construction.[83] While Salmons does not identify the formation of the iterative verbs which

Sverdrup also identified as amongst the initial verb classes in the periphrastic construction, the

durative is of the same aspectual category, referring to actions undertaken over a duration of

time rather than in an instant, indicating that one of the features for the development of certain

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[78] Salmons, 2012, pp. 71.
[79] Ringe, 2017, pp. 209.
[80] Salmons, 2012, pp. 79.
[81] Ibid., pp. 78.
[82] Ibid., pp. 79.
[83] Sverdrup, 1928, pp. 37.

subcategories of weak verbs was that of actions occurring over time or repeated within a time period making the durative and iterative both subcategories of great interest.

Moving from Central Indo-European and into proto-Germanic resulted in numerous changes in the verb system besides simply the development of the dental preterite. Each Indo-European language family went through a certain amount of restructuring when becoming their own distinct entity and all of these are relevant to the overall picture which can be observed by the time of written documentation.

One such change was the move away from a verb system structured around aspect to one structured around tense. As has been previously discussed, aspects and tenses do occupy a similar function in a verb system but their structure is different with aspects of tenses also being a possibility; for example, the future perfect. The term aspect itself also brings with it debate as how it is used today in reference to Slavonic languages can be somewhat misleading as the 'aspects' found in Slavonic languages are rather *action types* rather than the aspects found in Proto-Indo-European[84] and these must not be confused despite often using the same terminology.

However, Streitberg believed he had found evidence of Proto-Indo-European aspects as a remnant within Gothic.[85] His basis for this was the fact that compound verbs with prefixes, especially *ga-*, seemingly gained a perfect meaning. Subsequently, if this were to be accepted, the paradigm could also be stretched to a number of verbs within Old English which have a similar prefix of *ge-* in certain circumstances. However, Szemerényi believed that that theory and the subsequent spread of the idea to relate to a large number of Indo-European languages

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[84] Szemerényi, 2010, pp. 306.
[85] Streitberg, W. "PERFECTIVE UND IMPERFECTIVE ACTIONSART IM GERMANISCHEN". *Beiträge Zur Geschichte Der Deutschen Sprache Und Literatur*, vol 15, 1891.

to be an 'unjustifiable transference of the Slavic situation' as only the Slavic verb construction has such a structure of using prefixes to alter a verb's action type.[86] Sverdrup, does appear to agree with his conclusion regarding the *ga-* prefix being a form of a perfect aspect marker.[87] However, he believes that while this marker is not the original expression of the perfect, when the aorist and perfect came into competition some distinction was needed to maintain the usefulness of the perfect at least for a short period of time and from this need arose this prefix.[88]

Salmons goes on further to identify that verbs containing ablaut belong to one of two groups; the *e*-group or the *a*-group with the latter being the smaller of the two.[89] During the Germanic period, the Germanic *o* shifted into an *a* and would have resulted in previously separate verbs now appearing alongside the smaller *a*-group when forming the preterite. Should any weak verbs have fallen into this category, the need to distinguish between these weak verbs verbs and the original strong *a*-group could have resulted in the need for a construction to indicate which was which; this possibly could have been the periphrastic construction that would have become the dental preterite.

When reviewing the Germanic verbal system, the difference between weak and strong verbs can certainly not be ignored as they are one of the defining features of the language branch and the weak verbs are of primary concern given the discussion of the dental preterite; these verb classifications were initially identified by Jakob Grimm. However, even in these categories there are differences that can be separated out into distinct verbs classes which Sweet chose to define by verb purpose but are now most often referred to as simply strong verb classes I to VII.[90]

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[86] Szemerényi, 2010, pp. 306.
[87] Sverdrup, 1928, pp. 296.
[88] Ibid., pp. 296-297.
[89] Salmons, 2012, pp. 73.
[90] Sweet, Henry. *A Primer Of Historical English Grammar*. Clarendon Press, 1893. pp. 75.

|        | Class I | Class II | Class III | Class IV | Class V | Class VI |
|--------|---------|----------|-----------|----------|---------|----------|
| Part 1 | e       | e        | e         | e        | e       | a        |
| Part 2 | o       | o        | o         | o        | o       | ō        |
| Part 3 | Ø       | Ø        | Ø         | ē        | ē       | ō        |
| Part 4 | Ø       | Ø        | Ø         | Ø        | e       | a        |

**Figure 3.9** *The ablaut system of strong verb classes I to VI; classes I, II, and III are distinguished by semivowels following the root vowel.*

In **Figure 3.9**, the vowel changes of classes I to VI are shown according to the principal parts suggested by van Coetsem for the purpose of comparison.[91] These differ from the principal parts most often used for the Proto-Indo-European verb (those being the infinitive, the third person present singular, the first person preterite singular, the preterite plural, and the past participle) as van Coetsem used the present, the preterite singular, the preterite plural, and the past participle instead.

However, Class VII is notably different from the other strong verb classes due to ablaut that is not attested in other branches of Indo-European as well as for the survival of reduplication in Gothic and a number of remnants in other Germanic languages. Due to this substantial difference, Class VII for Gothic has been provided in a different table to that of the Class VII for Germanic. Jasanoff covers this extensively, detailing how the majority of strong verbs lost their reduplicated forms but maintained their ablaut and only in Gothic can reduplication as a functioning grammatical element be seen.[92] As there are as many differences between Class VII

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[91] Barrack, Charles M. "Review of *Ablaut and Reduplication in the Germanic Verb by Frans van Coetsem*". *Zeitschrift Für Dialektologie Und Linguistik*, vol. 62, no. 3, 1995, pp. 322.
[92] Jasanoff, Jay H. "From Reduplication to Ablaut: The Class VII Strong Verbs of Northwest Germanic". *Historische Sprachforschung*, vol. 120, 2007, pp. 244.

verbs as between verb Classes I to VI, Jasanoff breaks down the class into subclasses to give a more detailed view of their structure.[93]

|  | Class VII - i | Class VII - ii | Class VII - iii | Class VII - iv | Class VII - v |
|---|---|---|---|---|---|
| Part 1 | *ai* | *au* | *a* | *ē* | *ō* |
| Part 2 | *ai* | *au* | *a* | *ō* | *ō* |
| Part 3 | *i* | *u* | *u* | - | *ō/-* |
| Part 4 | *ai* | *au* | *a* | *ē* | *ō* |
| *Pattern* | *a + i* | *a + u* | *a + l/r/m/n + consonant*<br><br>*(if no additional consonant, Class VI)* | *ē* | *ō* |
| Example | *haitan* | *aukan* | *falþan* | *slepan* | *ƕopan* |

**Figure 3.10** *The ablaut pattern of Class VII in Gothic.*

|  | Class VII - i | Class VII - ii | Class VII - iii | Class VII - iv | Class VII - v |
|---|---|---|---|---|---|
| Part 1 | *ai* | *au* | *a* | *ā* | *ō* |
| Part 2 | *ē* | *eu* | *e* | *ē* | *eu/ē* |
| Part 3 | *ē* | *eu* | *e* | *ē* | *eu/ē* |
| Part 4 | *ai* | *au* | *a* | *ā* | *ō* |
| Example | *haitan* | *hlaupan* | *haldan* | *rēdan* | *blōtan* |

**Figure 3.11** *The ablaut pattern for class VII in Northwest Germanic.*

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[93] Ibid., pp. 247.

| | Class i - i | Class i - ii | Class i - iii |
|---|---|---|---|
| Present | No connecting vowel | *-j-* | *-j-* |
| Past (besides the dental preterite) | No connecting vowel | No connecting vowel but some consonant and vowel alternation | *-i-* |
| Example | *teilen* (Old High German) | *fremja* (Old Norse) | *satjan* (Gothic) |

**Figure 3.12** *Class i of the weak verbs, using data from Fulk.*[94]

| | Class ii | Class iii - stative | Class iii - factitive | Class iv |
|---|---|---|---|---|
| Present | *-ō-/-ōja-* | *-ai-/-ja-* | *-ai-/-ā-* | *-nan-* |
| Past (besides the dental preterite) | *-ō-* | No connecting vowel | *-a-* | *-nō-* |
| Example | *ƕuarbōn* (Gothic) | *segjan* (Old Norse) | *habban* (Old English) | *fullnan* (Gothic) |

**Figure 3.13** *Classes ii, iii, and iv of the weak verbs, using data from Fulk.*[95]

There are still peculiarities regarding the classes of weak verbs; for example, the fourth class is only properly attested in Gothic although cognates can be found in either class ii or iii depending on which language is being studied at the time.[96] Additionally, the third class was originally two separate classes that had fallen together by the Germanic period resulting in stative and factitives being listed together for their similar conjugations despite still evidently not being identical.[97]

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[94] Fulk, 2018, pp. 294-295.
[95] Ibid., pp. 304-314.
[96] Ibid., pp. 313.
[97] Ibid., pp. 308.

Ball discusses the four mechanisms of marking past tense that appeared in Germanic and how they were all, essentially, in competition with one another.[98] Firstly, there is the ablaut of the strong verbs that can be closely identified with the Indo-European perfect; secondly, the reduplicated preterite found almost exclusively in Gothic but with some instances also appearing in Old English; thirdly, Class VII verbs with an ablaut that cannot be identified with the Indo-European perfect; lastly, the weak dental preterite. He goes on to show how these preterite types were in conflict with one another and possible explanations for this beginning with the disadvantages of the strong ablaut. Firstly, Ball explains that the ablaut formation only functioned, except for a few aorist-presents, when a full-grade Indo-European *e* occurred in the verb's present stem.[99] This particular situation was largely bypassed due to Class VII verbs with ablaut and Class VI having a present-tense *a* become *ō* in the preterite.[100] Secondly, there are the issues brought about due to the sound changes that occurred at the time; as the Germanic languages separated moving into the Germanic period, the sound changes in the individual branches which came with this resulted in the, presumed, formerly orderly Germanic system of accented vowels breaking down into clusters of irregularities meaning that what was once one grammatical rule now encompassed a great deal more exceptions than before.[101] Unlike the first disadvantage, this one was not so easily bypassed and actually also affected the Class VII preterites as well. However, further changes were avoided due to the ablauting vowel remaining in the accented syllable; whereas Proto-Indo-European is believed to have had variable accent, Germanic moved away from this to initial stress, resulting in consistently unstressed suffixes which would be more likely to phonologically reduced than a stressed vowel. Therefore, while other grammatical features eroded around the ablauting vowel, it managed to remain due to its placement.[102]

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[98] Ball, 1968, pp. 164.
[99] Ibid.
[100] Ibid.
[101] Ibid.
[102] Ibid., pp. 165.

## 3.2  Indo-European Periphrastic Constructions

In order to show a predisposition towards periphrastic phrases in the Germanic languages due to the inherent links between morphology and semantics inherited from the parent language, the Germanic languages must be viewed within the larger context of Indo-European languages. This is so as to attempt to pinpoint other instances of such periphrastic constructions taking hold and possibly help to explain why the periphrastic preterite became so widespread.

The development of periphrastic constructions throughout the expansion and development of Indo-European languages can be seen in a number of examples from different branches, even when they likely had little to no contact, meaning that these developments can be analysed under the view that these traits were inherited in their early stages and developed as the language did or as a predisposition for such structuring that is present in all the daughter languages of Proto-Indo-European.

The most common periphrastic constructions contained a form of *have* or *be*, which can be seen in the Latin and Greek perfect examples, and were also formed from resultative verbs stemming from Proto-Indo-European, which is the case with Greek.[103] Given that these languages developed these periphrastic constructions separately, it indicates that when allocating auxiliary verbs for periphrastic constructions there are underlying factors in Proto-Indo-European grammar which correlate main verb type, or head verb, with auxiliary, such as perfect and *have* or *be*. As for the Germanic preterite, it could be suggested that the imperfective *\*dhe* correlated with derived verbs as *have* or *be* correlated with the perfect in the daughter languages and became the periphrastic construction predating the dental suffix.

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[103] Ibid., pp. 4.

Furthermore, the perfect plus participle constructions are some of the oldest attested constructions found in the family raising the question of whether or not ablaut was already fading in Proto-Indo-European even by the time that Hittite split away or whether it was simply for ease and uniformity that these constructions were used rather than an inflected form alone.[104]

Hittite

Hittite is the oldest attested Indo-European language and split from the main family before even some 'classical' Proto-Indo-European features could develop.[105] However, Hittite was one of a number of Indo-European languages which developed a periphrastic passive independently due to needing this particular structure despite it not being inherited, which may have also been the case for the Germanic languages developing a periphrastic preterite.

Hittite had both an inflected and a periphrastic passive; however, the passive has not been convincingly argued as existing in Proto-Indo-European meaning that both of these developed after the language split from the main branch.[106] Therefore, given that periphrastic constructions arose in the daughter languages for developing verb forms, it is not unrealistic to suppose that there is something in the foundations of Proto-Indo-European that leads to these developments even in separate languages.

The existence of the Hittite passive, and the similarities to the Vedic Sanskrit and Greek passives utilising a periphrastic construction stemming from a resultative, again brings into

[104] Ibid., pp. 9.
[105] Fortson, 2010, pp. 171.
[106] Shatskov, Andrey. "Periphrastic passive and resultative in Hittite and Proto-Indo-European", *Indogermanische Forschungen*, vol. 126, no. 1, 2021, pp. 2.

question whether a passive existed in Proto-Indo-European as constructions containing -*tó*- with resultative meaning were commonplace.[107] However, this has not been successfully argued for or against but does demonstrate that there are certain shared features across languages that may not have been inherited but separately built upon from a shared language foundation.

<u>Ancient Greek</u>

The second earliest attested of the sample is Ancient Greek which spanned a number of phases between the 15th Century BC and the 3rd Century BC; the earliest being Mycenaean Greek which was roughly contemporary with Hittite. Its vast attestation allows for the observation of how numerous elements of the language evolved or died out; for instance the development of aorist and perfect forms of derived presents which did not exist in Proto-Indo-European (Classical Attic Greek present *φυλάττειν* 'to guard' acquired an s-aorist *φυλάξαι* and a reduplicated perfect *πεφυλαχέναι*) but also how the periphrastic perfect developed from its beginnings as a resultative (seen as early as Homeric Greek in constructions such as *μεμιγμένον ἐστιν* 'it is mixed').[108] While the Ancient Greek periphrastic perfect had its origins in the resultative, as it developed it is possible that it entered into a non-focus event-space whereby the focus and event would have no longer been in the same mental space.[109] Ancient Greek also displays other facets of periphrastic constructions in both aspect and space as, in particular, the periphrastic perfect had elements of the aorist related to it either morphologically or semantically.[110]

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[107] Ibid., pp. 13-14.
[108] Ringe, 2017, pp. 191; Bentein, Klaas. "The Periphrastic Perfect in Ancient Greek: A Diachronic Mental Space Analysis", *Transactions of the Philological Society*, vol. 110, no. 2, 2012, pp. 171.
[109] Ibid.
[110] Ibid.

It is also worth noting where aspects are considered that one of the auxiliary verbs utilised in Ancient Greek is εἰμί translating to 'be'; however it must be noted this verb stems from the imperfective in Proto-Indo-European. Given the origins of *dhe, this could suggest that imperfective was chosen as a supporting system in other languages based upon inherited language foundations. The development of εἰμί is as follows: Proto-Indo-European root imperfective *$h_1$es- > Proto-Indo-European athematic root present *$h_1$ésti > Proto-Indo-European first person singular present indicative *$h_1$ésmi < Proto-Hellenic *ehmi < Ancient Greek εἰμί (eimí). As the Greek structure combines both aspect and tense it occupies its own mental space and may explain why the imperfective specifically became part of its structures and why it may have been chosen for the Germanic structure as well;[111] the imperfective being used may indicate a specific mental space for these structures that has since been lost as the imperfective has faded but can still be seen through certain periphrastic constructions.

Furthermore, similar to Latin which will be discussed later, the periphrastic constructions were utilised to avoid certain difficult phonological structures in Ancient Greek, such as consonant accumulation.[112] If having these varied structures allowed for the language to be simplified then the same could be supposed for the Germanic languages; as the ablaut lost productivity, the periphrastic preterite may have been preferred for greater transparency.

In regards to resultative and preterite aspects, Bentein cautions against more reductive reasonings that suppose one developed into the other. Instead, Bentein regards the event space as not necessarily shifting its focus while the structure may change or adapt; this is more

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[111] Ibid., pp. 175.
[112] Ibid., pp. 187.

similar to Gorlach's approach in examining resultativeness alone rather than coupled with other grammatical features which it has often been deemed to 'rely' on.[113]

<u>Sanskrit</u>

The next attested language in this analysis is Sanskrit, with Rigveda Sanskrit being dated to before the 2nd Century BC despite surviving manuscripts coming from much later. Along with other languages in the Indo-Aryan branch, Sanskrit displays periphrastic verbal constructions. In this particular instance it is the future, found in texts by the time of Vedic Sanskrit,[114] and past tenses which adapted to using a periphrastic construction and, importantly, these constructions had postverbal placement as would be expected from *dhe* in the Germanic preterite construction.[115] The future utilised the suffix -*tr*-, adapted from a noun formation, and in the oldest evidence both the root and suffix were stressed.[116] As for the past tense, the Indo-Aryan branch also demonstrated the periphrastic past tense with a resultative meaning formed from the bare root of a verb and the suffix -*ta*-.[117] While these suffixes do not strictly fall under most ideas of periphrastic structures, their origins and Lowe's approach to studying the formation in Sanskrit makes it a worthwhile analysis.[118] Additionally, it can be again seen that the resultative has a clear influence on the grammatical development of the daughter languages and possibly how they formed structures with a resultative aspect.

Furthermore, it is also relevant to the discussion is how the periphrastic phrases are not 'symmetrical' meaning that the head, the main verb, carries the meaning while the non-head,

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[113] Ibid., pp. 191.
[114] Lowe, John J. "The Sanskrit (Pseudo)Periphrastic Future", *Transactions of the Philological Society*, vol. 115, no. 2, 2017, pp. 263.
[115] Ibid., pp. 270.
[116] Ibid., pp. 269.
[117] Dahl, Eystein. "Tense and Aspect in Indo-Iranian Part 2: The Perfect, Futurate, Participial and Periphrastic Categories", *Language and Linguistics Compass*, vol. 5, no. 5, 2011, pp. 293.
[118] Lowe, 2017, pp. 264-265.

the auxiliary, is the support;[119] in the case of the Germanic languages this would mean that *dhe* and its imperfective meaning would not be carried over; however this raises the question of why the imperfective, as with Ancient Greek, was chosen in the first place and whether the imperfective verbs chosen do play a part in the construction or not or is it the case that they originally had a function within the construction that has since been lost.

Latin

Finally there is Latin, with the earliest inscriptions discovered coming from the 7th Century BC, which had three periphrastic constructions of note: the passive, the future, and the perfect. Some of these tenses also developed as periphrastic constructions in other languages as previously discussed.

Both the Latin passive and the Latin future periphrastic constructions were constructed from a form of *esse* 'be' coupled with a suffix: *-ndus* for the passive participle and *-urus* for the future participle.[120] While the auxiliary is not the suffix in this instance as it would have had to have been for the Germanic periphrastic preterite, it does suggest that, to express a certain grammatical category, a suffix was grammatically beneficial in indicating this purpose even when part of a periphrastic construction. It is possible that this tendency to demonstrate category through affixation stemmed from Proto-Indo-European and the relationship between morphology and semantics present in derived verbs.

In the case of the Latin periphrastic perfect, it can only be analysed as a periphrastic form of *habere* (take, 'have') and a perfect participle in the oldest attested forms of Latin and, similar to

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[119] Ibid., pp. 266.
[120] Steele, R. B. "The Passive Periphrastic in Latin", *Transactions and Proceedings of the American Philological Association*, vol. 44, 1913, pp. 5.

other older Proto-Indo-European languages, is believed to be a reanalysis of a resultative construction.[121] Given the age of the change and how it had already become well established by the time of Latin documentation, it can be supposed that it was implemented to support failing Proto-Indo-European structures through reanalysis during the later stages of Proto-Indo-European and into Proto-Italic, similar to how the dental preterite would have originated in Proto-Germanic. Similar to Lowe's comments on Sanskrit, *habere* also carries no meaning of its own in this construction and had to undergo this semantic loss in order to become recognisable as part of the construction.[122] While the Greek use of the imperfective suggests that there is an otherwise unclear event space that the use of the imperfective may occupy when forming these constructions, how *habere* is used shows that perfect verbs could also be stripped of meaning to instead be used only as a supporting auxiliary. In relation to the Germanic preterite, *\*dhe* may have originally signified an important semantic distinction but through the stripping of its meaning as a non-head and then haplology this could all have been lost until all that remains is the support structure and, now, the preterite suffix.

Another important note when considering the periphrastic constructions found in Latin, especially the future, is that the periphrastic construction was favoured over an ablaut future and provided a uniformity among the verbs which was preferred by the speakers.[123] If this was favoured over time for regularity and transparency by the speakers of Latin then it is also possible that the speakers of Proto-Germanic preferred a periphrastic construction for the weak preterite over attempting to assimilate these verbs into a changing ablaut system for ease and uniformity.

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[121] Hertzenberg, Mari Johanne. "*Habere* + pp and the Origin of the Periphrastic Perfect", *Journal of Latin Linguistics*, vol. 14, no. 1, 2015, pp. 33.
[122] Ibid., pp. 39; pp. 57.
[123] Steele, R. B. "The Future Periphrastic in Latin", *Classical Philology*, vol. 8, no. 4, 1913, pp. 457.

One area that is worthy of further note is the cross-language development of certain structures that was potentially influenced by Greek due to translations of the Bible being so literal to the source text that Greek syntactic structures were borrowed into other languages; including Latin and Gothic as well as Slavic.

Due to the translation of the New Testament from Greek, it is supposed that certain periphrastic constructions, namely the progressive and the perfect, became more prevalent in languages which based their own translations on Greek sources.[124] While this does not mean that the constructions themselves did not exist before the translations and they may have developed in these languages separately, the usage and frequency of them may have been influenced by the text.

| Greek | *συκῆν* | | *εἶχέν* | *τις* | *πεφυτευμένην* |
|---|---|---|---|---|---|
| | fig tree | | have | someone | plant |
| | feminine accusative singular | | imperfective active, third person singular | | perfect passive participle, feminine accusative singular |
| Latin | *arborem* | *fici* | ***habebat*** | *quidam* | ***plantatam*** |
| | tree | fig | have | someone | plant |
| | feminine accusative singular | | imperfective active, third person singular | | perfect passive participle, feminine accusative singular |

**Figure 3.14** *Example comparison between Greek and Latin perfect constructions using data from Drinka.[125]*

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[124] Drinka, Bridget. "The sacral stamp of Greek: Periphrastic constructions in New Testament translations of Latin, Gothic, and Old Church Slavonic", *Oslo Studies in Language,* vol. 3, no. 3, 2011, pp. 42.
[125] Ibid., pp. 42-43.

| Greek | καὶ αὐτὸς | ἦν | Ἰησοῦς | ἀρχόμενος | | ὡσεὶ ἐτῶν τριάκοντα |
|---|---|---|---|---|---|---|
| | and he | was | Jesus | beginning | | about years old thirty |
| | | imperfective active, third person singular | | present participle | | |
| Latin | et ipse Jesus | | | erat | incipiens | quasi annorum triginta |
| | and himself Jesus | | | was | beginning | like of years thirty |
| | | | | imperfective active, third person singular | present participle | |

**Figure 3.15** *Example comparison between Greek and Latin progressive constructions using data from Drinka.*[126]


While this does raise some questions about what can be regarded as a 'good' translation, it can be seen that the translations aimed to be as syntactically similar to the Greek as possible, especially in early Latin and even Slavonic. These translations even shirked typical linguistic features of the target language in favour of emulating Greek structure in their writings.[127]


It must be noted that certain Gospels themselves aimed to emulate more archaic styles to establish a more historic aura and this involved utilising certain Semitic constructions, including the periphrastic progressive.[128] However, the periphrastic perfect is not attested in the heavily Hebrew-influenced Greek suggesting that this construction developed solely within Greek, and by extension other Proto-Indo-European languages, without or despite outside influences from non-related languages.[129]

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[126] Ibid., pp. 49.
[127] Ibid., pp. 43.
[128] Ibid., pp. 45.
[129] Ibid., pp. 46.

Beyond encouraging certain constructions, the translation of the New Testament also appeared to have shifted the usage of pre-existing structures; for example, with the periphrastic perfect, Classical Greek writings tended to opt for ἔχω 'have' coupled with an aorist participle while this structure is less common than 'be' with a perfect participle in the New Testament though this could have been a diachronic change within Greek that remains present despite the emulation of a more archaic style.[130] The 'have' constructions were rather relegated to a smaller subcategory constituting mostly of passives and possessives.[131] These 'have' constructions are also of particular note as the Latin calques the Greek constructions but does not for the same 'be' constructions which Greek appeared to modify from Hebrew; from this it could be inferred that the 'have' periphrasis was more natural in both the Latin and the Greek and is more founded in the shared Proto-Indo-European grammatical system compared to the borrowed forms from Hebrew.[132]

Other Latin texts of the time emulating the Greek style but not the Christian one use almost no periphrastic perfects, however;[133] as previously examined, other Latin periphrastic constructions did exist so while the periphrastic perfect itself may have been directly borrowed from Greek and became a grammatical staple, the fact that it could be so easily adopted and incorporated alongside existing periphrastic constructions speaks to the innate nature of Proto-Indo-European languages. Such structures were readily developed and even preferred, in some instances, for forming new constructions over the old systems which would have been too complicated to manipulate, especially when hoping to maintain a certain literary style.

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[130] Ibid., pp. 48.
[131] Ibid., pp. 48-49.
[132] Ibid., pp. 50.
[133] Ibid., pp. 53.

However, it is not universally accepted that this structure was directly borrowed from Greek. It is also theorised that it had developed separately and simply became more common due to Greek influence as this structure would go on to become the basis for the periphrastic perfect in the Romance languages.[134] If the structure was completely borrowed from Greek and did not exist in Latin beforehand then it means that the subsequent Romance languages actually inherited this structure from Greek. This poses further questions on what other significant changes in grammar may have come about from outside language influence; especially in regards to the Germanic languages which were documented far later.

Overall, what can be gained from analysing these translations is that while certain structures and phrasing have been borrowed repeatedly, most often through Greek, definitely had an influence on the frequency and usage of periphrastic phrases. Certain properties of Proto-Indo-European mean that similar types of structural innovation can occur independently in the various daughter languages but contact, in the form of prestigious and influential written texts for example, may affect the distribution of innovative forms. While that is not to say that they never existed beforehand, they may have become more prominent due to replicating style, perhaps for uniformity throughout Christian scripture and ease of teaching.

A common thread with a number of the periphrastic constructions across Proto-Indo-European would appear to be the resultative; when applying this to the Germanic preterite it can be disputed as the resultative has often been overlooked as an independent aspect function and often tied in to other grammatical aspects, such as perfect meanings, or the successfulness of the action.[135] However, Gorlach disputes this, especially in the case of Modern English, claiming that successfulness of an action does not constitute resultativeness but rather the completion of

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[134] Hertzenberg, 2015, pp. 34.
[135] Gorlach, Marina. *Phrasal Constructions and Resultativeness in English : A sign-oriented analysis*, John Benjamins Publishing Company, 2004, pp. 48.

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an action itself regardless of the outcome.[136] Furthermore, the perfect aspect does not always constitute a resultative meaning so the resultative needs to be addressed as its own feature regardless of aspect.[137] As there is no specific marker for resultative, particularly in Modern English, it has fallen to participles to be sign marking with *-ing* being the progressive and, therefore, *-ed* being resultative.[138] If this linguistic approach is accepted then it shows that the weak dental preterite has a form of resultative meaning and demonstrates linguistic links with the rest of the Proto-Indo-European family through the use of periphrastic constructions built upon existing verb forms coming to denote a resultative state; while the perfect aspect may have once encompassed the entirety of the resultative, as the grammar of Proto-Indo-European diverged and changed, new forms were needed and so periphrastic phrases were embraced to express what had been lost.

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[136] Ibid., pp. 49.
[137] Ibid.
[138] Ibid., pp. 56-57; Botsman, 2020, pp. 144.

## 3.3  The Dental Preterite

Having examined the development of the Indo-European verb structure, this study will now turn
its focus to the formation of the preterite. However, while origins of the dental suffix will be
considered, the majority of attention will be focussed on the verbs affected and reasoning for
why the formation was needed as opposed to focussing on phonological debate.

While Sverdrup and Salmons both theorised about which verb types may have been the original
recipients of the weak preterite formation involving a dental, a timeline of which verb types
subsequently became part of the construction has not been decisively decided on though there
have been proposals such as in **Figure 3.16**. It is evident from both modern Germanic
languages and the attestation of the older Germanic languages that, by the period of surviving
literature (approximately between the 6th and 12th Centuries), the dental preterite was already a
defining feature of the weak verbs but it is also necessary to look at what point the change may
have come about and how fast and how far the change may have spread leading into and
throughout the Germanic period.

1. perfect and aorist become isofunctional

2. imperfective *dhe* introduced as a post-verbal auxiliary for derived verbs

3. grammaticalisation

4. haplology

5. (causative) Class i

6. Class ii and Class vi

7. Class iii

8. preterite presents

**Figure 3.16** *Possible chronological origin and spread of the dental preterite through verb categories from late Proto-Indo-European and into the Proto-Germanic period.*[139]

Additionally, instances of strong verbs bearing weak endings, such as 'to bring', are raised by Must who believed that the preterite formation actually originated due to a phonological development in the guttural stems of strong verbs rather than an Indo-European *-t-* or the *dhe* construction.[140] When reviewing this theory of the preterite ending, it must be noted that the second person ending in Proto-Indo-European was *-tha* which developed into *-ta* in Early Germanic. As previously discussed, one theory proposed was the dental preterite stemming from a Proto-Indo-European *-t-* and this second person ending is similar in some respects to that theory but supposedly also explains certain atypical features in the Germanic languages, such as the *-þi* ending found in Old Norse.[141] However, as Must states, this ending is particularly relevant in regards to the Proto-Germanic third class strong verb *bringaną* (to bring) as during the Germanic period the second person form developed into *braŋxta* and then *brāxta*.[142] From this, the second person ending fused with the stem resulting in the *-t* becoming a tense signifier

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[139] Ball, 1968, pp. 182; Ringe, 2017, pp. 181.
[140] Must, 1951, pp. 127.
[141] Ibid., pp. 128.
[142] Ibid., pp. 127; Ringe, 2017, pp. 280 provides the reconstruction of *'*bringaną, *branhtē, *branhtaz'*.

and so survived the loss of other personal endings. The only other surviving instance of such a change in the second person is found in the preterite present verb *maganą* (may) and both forms are noticeably divergent from both other forms of the verb and other second person forms. In such circumstances, what would have been expected would be analogical levelling in favour of the majority or replacement of the divergent form which is what Must claims to have happened in West Germanic where similar sound changes had occurred in verbs without the final guttural.[143] Due to these changes in non-guttural verbs, Must summarises that the second person singular strong preterite forms were replaced with forms of the aorist.[144]

However, despite the replacement of forms and levelling, the divergent form of 'to bring' survived, breaking the paradigm of the perfect and Must puts forward the theory that this led to *bringaną* being among the first of the weak verbs as it is from its second person ending that the *-t* spread to, first, other singular forms and then the dual and plural.[145] Must believed *bringaną* to be the originator, or one of the originators, of the dental due to this second person ending but also due to it being a *j*-present in Proto-Indo-European.[146] Must agrees with Kluge that the *j*-presents were originally a group of strong verbs with a strong preterite that lacked ablaut or reduplication and so relied on their personal endings to make their preterite form clear and Ringe notes that all Class i weak verbs are in fact *j*-presents.[147] If Must's theory is to be believed, then with the rise of this personal ending being used as a preterite marker across verb forms, there were now preterites bearing the dental and those without standing side-by-side. From this there would have been a growing need for other verbs to have a preterite marker

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[143] Ibid., pp. 128.
[144] Ibid., pp. 125.
[145] Ibid., pp. 126.
[146] Ibid.
[147] Ringe, 2017, pp. 284; Kluge, Friedrich. *Die Elemente des Gotischen; eine erste Einführung in die deutsche Sprachwissenschaft*. K.J. Trübner, 1911, pp. 85-86.

along with the preterite presents to distinguish the tense and Must supposes that this is how the formation spread from its origin as a personal ending.[148]

While this theory can account for certain endings that other preterite theories cannot, it most importantly does not explain why only these two verbs would be left unlevelled or unchanged while others with the same development were. If we suppose that they were not the originators of the suffix and that the dental suffix was already functioning, with the preterite presents already having come about before this phonological change, then the logic could be applied to *bringaną* that there were already instances of formerly strong verbs in the form of preterite presents taking on the dental suffix. Therefore, when this phonological development occurred it was not necessarily seen as irregular in terms of the ending as other examples were already functional. As to why this particular ending was not levelled out, the logic of the preterite presents could once again be applied as the very act of bringing something implies an action occurring in the past to acquire whatever it is that is being brought. While the existence of *bringaną*'s ending may not be an actual weak ending but rather a reanalysis; its continued existence is related to it but trying to explain the whole formation on this verb being the originator of the phonological shift alone is the downside of this theory.

However, if the *dhe* formation theory is to be believed as a supporting structure for collapsing verb systems then this explanation cannot provide substantial basis as to why the formation spread to verbs with unrelated meanings or morphology, even if the need for such a structure was not the primary reason for development. Additionally, the formation would appear to arise far later than the proposed construction theory suggests. To understand the development of the dental preterite beyond its phonology, a timeline feels necessary to establish why this specific marker was important and which verbs gained it; however, while these verbs may have needed

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[148] Must, 1951, pp. 127.

the construction for clarity, it is important to note that this need may not have been the only motivator behind the change. Both Salmons and Sverdrup put forward that the causatives were amongst the originators of the formation and they were from a group of derived verbs in Proto-Indo-European; these verbs were derived from either other verbs or nouns with a suffix indicating their function. The causatives utilised the *-jan* suffix to show that the affixed verb or noun was the cause of another action and these derivational suffixes were a formation of the Proto-Indo-European preterite.[149] These derived verbs were not specifically perfect or aorist and the suffixes were rather about indicating verb type outside of the aspect system. They did not have a present construction and other Proto-Indo-European languages, including Sanskrit, Greek, and Latin, used additional constructions to produce a derived present indicating that forming additional constructions around the derived forms to support it or modify it to produce a particular outcome is not outside the realm of possibility for the developing grammar of Indo-European languages.[150]

As the aorist and perfect became isofunctional and came into competition in the pre-Proto-Germanic era due to a semantic shift in the perfect from stative to resultative,[151] the derived verbs forms would have become almost indistinguishable and so it is highly likely that here is when the supporting structure was introduced utilising a verb form that had not yet become redundant; the imperfective, namely *dhe*. If this is the case than the emergence of the *dhe* construction may have actually helped the perfect to win out over all over the aorist as it was now truly no longer needed. It is also worth noting that this timeline places the inception of the preterite far earlier than Must's Germanic proposal regarding the second person. Additionally, *to do* is derived from *dhe* and is the only imperfective that survived into the

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149 Salmons, 2012, pp. 79.
150 Ringe, 2017, pp. 191.
151 Ibid., pp. 181.

Germanic languages.[152] While *dhe is utilised in this theory as the origin of the dental preterite, it will most likely never be known if *dhe was simply the imperfective which won out amongst a number of others during this stage of development.

Following this timeline through would then suggest that the post-verbal *dhe was attached to the main verb and contracted through haplology and became an ending as opposed to an auxiliary verb before the shift of the preterite presents as the ending would already be fully functional by the time that they required an ending due to their original preterite form shifting to the present and so assigning them the established weak ending would not have disrupted the verb structures any further. From this, *bringaną's ending would not have been a disruption either and was not levelled out for semantic reasons as previously discussed.

However, there are outliers that must also be considered but it is worth noting that these could also potentially reveal the extent of change that followed in the wake of the widespread adoption of the weak preterite formation. The main outliers that will be considered here are the class of preterite present verbs and how their usage may indicate the reason for adopting this particular supporting system.

A preterite present verb is classified by its abnormal structure whereby they were originally strong verbs that had their present form fall out of use and so the ablaut form of the preterite became the present form and then the weak dental suffix was affixed to the infinitive stem. One such example of a preterite present verb can be observed in the Old English *witan* ('to know'); the verb undergoes ablaut of the expected paradigm, and any person or number endings are affixed once the infinitive ending -*an* has been removed. This results in the first person singular present being *wat* and the first person singular preterite being *wiste*. Salmons claims that the

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[152] Ibid., pp. 182.

Proto-Indo-European perfect does survive into the Germanic languages within the classes of strong verbs and among these perfects are also the preterite presents which originally were also strong.[153]

The development of the preterite-present verbs is perhaps not as obscure as the origins of the dental preterite. Reasons why the past tense form shifted to the present are sometimes identifiable from what the verb stems from; such is the case with 'know' as Botsman and Dmytruk write that it is semantically related to 'have learnt' and even compares it to similar instances of verb change in Latin.[154] This change came about as they represent the result of an action which occurred in the past.**[155]** Botsman and Dmytruk go on to discuss the development of preterite-present verbs in Germanic into modal verbs which are an irregularity shared across the Germanic languages and this also agrees with Salmons' claims that the modals are originally derived from the perfect aspect.[156] However, Botsman and Dmytruk do discuss Randall and Jones who question the existence of a 'derived stative' as a category of Proto-Indo-European and Germanic verbs especially regarding preterite-presents and, subsequently, modal verbs as the links are commonly deemed too tenuous. The derived stative is a form whereby perfect endings are applied to aorist verbs and may be a missing link between the Proto-Indo-European root stative and perfect but the theorists believe it to be morphologically more likely to be a form of the Proto-Indo-European perfect.[157]

Randall and Howard are particular to note that despite how the preterite present verbs are similar to strong verbs and can be categorised together with them in ablaut tables, it is important

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[153] Salmons, 2012, pp. 71.
[154] Botsman, Andriy; Dmytruk, Olga. "Trans-Germanic Peculiarities Of Preterite-Present Verbs". *Actual Issues Of Ukrainian Linguistics: Theory And Practice*, no. 40, 2020, pp. 144.
[155] Ibid.
[156] Ibid., pp. 145; Salmons, 2012, pp. 71.
[157] Ibid., pp. 147; Dmytruk, 2020, pp. 147.

to recognise that their ablaut changes are often different to what can be expected from the strong verbs.[158] Randall and Howard provide fourteen securely attested preterite-present verbs in the early Germanic languages and a reconstructed fifteenth for Proto-Germanic based on Old English evidence.[159] They go on to suggest that the morphological similarities of the preterite-present verbs to the strong verbs have always been important and essential to their analysis as most theories suggest that both groups are derived from the Proto-Indo-European perfect but that the preterite presents retained the Proto-Indo-European verb reference to a state rather than time.[160]

From this, it can be viewed that this morphological change based on what appears to be predominantly semantics of what the verb is used for suggests that this could also have been the reasoning for why it was the derived verbs which were reanalysed and survived while aorist reflexes and almost all imperfectives were lost, and may also suggest reasonings behind the first spread beyond the derived verbs through semantic analogy. While the preterite presents are not derived verbs in the sense that they are suffixed or otherwise modified forms of existing verbs or nouns, both preterite presents and the causative class do rely on other actions causing their own action or resulting from it.

Understanding these semantic elements and how the morphology and developing structure of these verbs led into the development of the preterite proves to be just as crucial as studying the origins of the dental element as it shows the logic and reasoning behind how the language changed even if it was on a subconscious level.

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[158] Randall, William, and Howard Jones. "On The Early Origins Of The Germanic Preterite Presents". *Transactions Of The Philological Society*, vol 113, no. 2, 2014, pp. 137.
[159] Ibid., pp. 137.
[160] Ibid., pp. 138.

In terms of why the periphrastic preterite formation came about, verb formation as a whole must be considered and what dispositions lie within the Germanic verb systems for differing structures. A key aspect will be considering the event structure of the verbs affected and whether how the verbs were used played a part in them utilising the periphrastic construction. Another factor that will be addressed is the Jespersen's cycle; while this primarily applies to negation, the predisposition for cycles and Indo-European languages altering their structures beyond what is necessarily logical is evident from this.

The event structure of verbs as a theoretical linguistic concept can often seem abstract and disconnected from specific language usage; a more practical analysis was first conceptualised by Naumann but Latrouite succinctly explains the concept and subsequent works thusly: non-perfect verbs are analysed as presupposing changes which are comprised of two complementary perspectives; the first of which being an action or event (the object) which brings about change and the second being something brought about by the change (the result).[161] The example verb phrase that is given is 'eat an apple' with the event type being 'eating', change as an object, and the state is that of the apple going from whole to non-existent, change as a transformation. These structures are acted out along a timeline referred to as the execution sequence beginning with the inception point and finishing with the culmination point and between these lies the development timeline over which the event occurs.[162] However it is important to note that change as an object and change as a transformation cannot always be expected to be one-to-one relations but rather one-to-many, such as with the example given of the 'walking' event type as in a minimal state it refers to the fact that a path has been traversed but in a maximal state it reflects that a destination has been reached. If only the minimal is considered then the phrase can be seen to refer to 'a stroll' around an area while if both are

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[161] Latrouite, Anja. *Voice And Case In Tagalog: The Coding Of Prominence And Orientation*, Heinrich Heine University Düsseldorf, 2011, pp. 57.
[162] Ibid.

considered it indicates achievement of having walked 'all the way' to a destination. The different results reflect different aspectual classes which must be considered.[163] Maximal results refer to results only gained at the culmination point while minimal results can occur anywhere along the duration of the event and are best considered as the culmination points of sub-events within the overall timeline. While Latrouite and Naumann both used practical analysis in regards to Tagalog, the theory as a whole can be used to examine any language with non-perfect verbs and while more general theoretical literature can provide insight into the workings behind the theory, the practical approach is more succinct in terms of analysis.[164]

The event structure of non-perfect verbs is a relevant consideration in regards to the Proto-Germanic weak verbs. If the periphrastic construction was originally a supporting structure then it may have been in regards to aspects of the non-perfect verbs found not necessarily in their morphology but instead in their usage.

As has been previously discussed, the weak verbs are derived from a number of classes other than the perfect; these being, causative, denominative, durative, and inchoative. Analysing these non-perfects through the lens of the event structure theory may help to highlight reasons why they were singled out for the preterite construction if their event structure required additional support in the Proto-Germanic period.

When we assign this theory to the Proto-Indo-European derived verbs, then it becomes possible to assess their event structures and determine whether this had any impact on their development. As the *-jan* class are considered the originators and are of the causative class, it

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163 Ibid., pp. 58.
164 Ferretti, Todd R.; Rohde, Hannah; Kehler, Andrew; Crutchley, Melanie. "Verb aspect, event structure, and coreferential processing", *Journal of Memory and Language*, Volume 61, Issue 2, 2009.; Warglien, Massimo; Gärdenfors, Peter; Westera, Matthijs. "Event structure, conceptual spaces and the semantics of verbs", *Theoretical Linguistics*, vol. 38, no. 3-4, 2012.

feels important to begin with them. Causative verbs lead to another action and predominantly consist of having something or someone complete the action to a desired result meaning that with an example such as *to raise* (*\*raisijaną*) the event type would be raising, the change is being raised. Denominatives are formed from nouns and are grouped due to formation rather than usage but with an example like 'salve' (*\*salbōjaną*) then the event type is salving and the change is the area or wound being cleaned; as they are grouped due to their formation rather than usage, each verb may encapsulate a different kind of change and so this group could be further subcategorised. The class of durative verbs relate to verb actions performed over a certain amount of time rather than having an immediate result meaning that in terms of verb event types they mostly work on the maximal scale but still have culmination points. With the example of 'play', change would be the action of playing and the transformation correlates to the time that action has been happening. Meanwhile the inchoative class are largely reflexive in sense and refer to a change of state, often beginning or becoming meaning that the verb 'ripe' has the event type of ripening in terms of the object and reflexive subject and the transformation is the change of the object to becoming ripe.

From this, it is clear that like the preterite presents, the causatives are reliant on additional actions and their timeline of maximal or minimal effects may have been indicated by whether they were derived from the aorist or perfect form. However, as these two classes had fallen together a distinction may have had to be made especially in regards to expressing maximal results and so *\*dhe* was used to indicate that an action was done to completion. From here, the ending may have been analogically levelled to other derived verbs as they were all non-perfect despite not all of them requiring additional actions.

The Jespersen's cycle demonstrates grammatical change within French overtime as supporting structures are introduced and eventually replace the structure they were originally supporting;

as the dental preterite is being proposed as a supporting structure which was eventually affixed to the verb form by haplology. To apply this cycle to the Germanic language in regards to the preterite, it is best to approach it through grammaticalisation whereby there may have been a verb form which needed supporting or the fading aspects needed the support and so the *dhe formation came into use, eventually becoming the predominant preterite formation for weak verbs throughout the Germanic era.[165] In terms of *dhe, as with other periphrastic constructions, the auxiliary loses its lexical weight and this is a key aspect of grammaticalisation and the process of a separate icon becoming an affix.[166] Furthermore, the weakened icon becomes ingrained in the construction to the point that it no longer retains any iconic meaning of its own and becomes only a symbol which would then allow it to be contracted through haplology as no meaning or weight was being lost by reducing it.[167]

In terms of typology in relation to negation and the process of moving back and forth between postverbal and preverbal preferences, changes over time are recognisable across a number of different and unrelated languages with this raising the question of whether language change is inevitable and if there are a series of changes leading back to one finite initial point.[168] If this is to be applied to the compounding dental preterite theory then the cycle would likely consist of a verb form representing the preterite, gaining a supporting auxiliary verb (such as *dhe in this instance), over time the auxiliary loses meaning, and is then affixed by haplology resulting in the form simply representing the preterite overall and needing a supporting auxiliary verb. Part of this hypothetical cycle has seemingly already occurred due to the fact that the dental preterite

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[165] Larrivée, Pierre. "The Pragmatic Motifs Of The Jespersen Cycle: Default, Activation, And The History Of Negation In French". *Lingua*, vol 120, no. 9, 2010, pp. 2240-2241.
[166] McMahon, April M. S. *Understanding Language Change*. Cambridge University Press, 1994, pp. 160; 166.
[167] Ibid., pp. 171-172.
[168] Larrivée, Pierre; Ingham, Richard. *The Evolution Of Negation*. Hubert & Co., 2011, pp. 2; Ibid., pp. 145.

exists at all and it is not unheard of in grammaticalisation for an icon to lose all meaning and need support, beginning the cycle of grammaticalisation all over again.[169]

The Germanic languages are also notable within the Jespersen cycle as early on in their recorded histories they began to lose preverbal negators favouring postverbal instead with Old and Middle English having been studied in particular for their loss of *ne*.[170] While referencing negators it shows a preference for postverbal placements meaning the haplology theory would make sense as the auxiliary verb in the Germanic era would also most likely have taken a postverbal position.

Another facet to be covered when analysing the predisposition for the growth and spread of the periphrastic construction are the prepositional constructions of Middle English. Intensifiers, or boosters, are still used adjectivally within Modern English but the prefixing of adjectives in Old and Middle English, as well as Modern German, indicate that the Germanic language base is flexible to such changes and indicates that the periphrastic construction may not have just been a support of an older construction that had fallen away but rather it was an intensifier. Furthermore, the development of the prepositional passive in English and Scandinavian languages indicates that verb systems are also prone to change and can offer insight about what change may have taken place to produce the dental preterite as it is used by the time of Germanic documentation.

Another verb construction that underwent great change is the passive resulting in the structure used today; however, this pseudo-passive or prepositional passive is undocumented in Old

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[169] Ibid., pp. 172.
[170] Larrivée, 2011, pp. 3.

English and is first attested in Middle English but even this is widely discussed.[171] Goh puts

forward that there are elements of Old English that indicate the progression into a prepositional

passive[172] which can be used as a basis for analysing how the preterite may have also resulted

from predisposed forms but did not become a fully realised structure itself until later. This

comparison is worthwhile as the progression into the dental preterite as a functioning system is

undocumented but similar language change instances have more evidence and can provide

insight into what could have happened with the preterite.

Goh argues that while the periphrastic form of the prepositional passive is indeed a developing

feature found in Middle English, the morphological incorporation of Old English in fact mirrors

what the structure would become and cannot be ignored as a basis for the construction.[173] While

this system appears to undergo the reverse development compared to the preterite, this also

ties into the Jespersen's cycle and that languages go through phases of continuously building

on and replacing structures but it also shows that if a language can separate elements into a

periphrastic phrase, it is just as possible that a periphrastic phrase could be contracted into one

grammatical element.

Furthermore, the development of prepositional passive is not isolated to English alone and is

also found in Danish, Swedish, and Norwegian though are not as common as in English.[174] The

development of this system in different Germanic languages shows that they are susceptible to

change regarding verb structures and are not completely inflexible meaning that the

development of the preterite would have likely met little resistance especially as there were no

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[171] Goh, Gwang-Yoon. "The Advent Of The Prepositional Passive: An Innovation Of Middle English?". *English Studies*, vol 82, no. 3, 2001, pp. 203.
[172] Ibid., pp. 204.
[173] Ibid.
[174] Engdahl, Elisabet; Laanemets, Anu. "Prepositional Passives in Danish, Norwegian and Swedish: A Corpus Study." *Nordic Journal of Linguistics*, vol. 38, no. 3, 2015, pp. 285.

written records of Germanic which may have promoted a stricter adherence to form and structure.

The structure of adjectives and adverbs being used as intensifiers is evident in older Germanic languages but the construction has continued through into modern English and German as well.[175] What is particularly notable are the bound morphemes which are affixed to the beginning of the verb[176] and this compounding is a feature of the Germanic languages that can be applied to the dental preterite as, despite the affixation being postverbal, which may have been due to the structure of Proto-Germanic, it shows the predisposition of affixation of the Germanic verbs and their flexibility for change whether this be intensifying or supporting of eroding structures. However, I believe it should be noted that these are not necessarily separate scenarios as, as the cases eroded and a supporting postverbal auxiliary was introduced, this may have originally had an intensifying element to it so that the meaning of the structure was clearly evident. Old English has a far greater number of prefix attestations than Modern English which brings it more in line with Modern German,[177] resulting in varied combinations of which not all can be accurately distinguished due to immense similarities.[178] This suggests that even if we as modern readers cannot distinguish between the meanings, there was clearly separate usage for them that we are not aware of and such a situation could have arisen for the preterite's use whereby a form without the periphrastic construction was used and the additional auxiliary had a slightly different meaning which has been lost to time similar to the Jespersen's cycle. However, rather than being introduced to support a form that had lost its meaning, this was introduced to support something else but subsequently took over.

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[175] Lenker, Ursula. "Booster Prefixes in Old English - an Alternative View of the Roots of ME Forsooth." *English Language and Linguistics*, vol. 12, no. 2, 2008, pp. 245.
[176] Ibid., pp. 255.
[177] Ibid., pp. 249.
[178] Ibid., pp. 254.

## 3.4 Reduplication

When considering the dental preterite as a supporting structure and what it was first utilised for syntactically rather than the inflectional morpheme that is today, it becomes clear that Proto-Indo-European, by the stages of Germanic development, had already established rules for utilising auxiliary verbs which is how *dhe* is to be considered in the periphrastic construction. However, outlying structures must also be considered in an attempt to determine why the periphrastic preterite was the structure which became widespread, in this case reduplication.

As previously discussed, the Proto-Indo-European verb system did not form 'tense' based on verb affixes but rather the type or use of the verb was denoted by affixes, such as the *-jan-* causatives. 'Tense' was indicated by particles as can be seen in Sanskrit and Greek and these languages also suggest that these particles were used post-verbally.[179] In regards to the development of the weak preterite, given that *dhe* would have had to be a post verbal auxiliary to first become a suffix and then develop through haplology, it is possible to suggest that the imperfective was actually being used more as a particle in this regard with this support being brought in and conforming to already established syntax. As the preterite developed with a sense of completion indicating an aspectual meaning, this could be viewed as one of the shifts from Proto-Indo-European to Proto-Germanic where aspectual meanings became tied with tense formations and over time these tense formations became more and more productive.

However, the syntax of Proto-Indo-European is still uncertain as it is purely reconstructed from what can be observed in the daughter languages, meaning that claiming without a doubt that this is the structure the periphrastic construction mimicked is not possible. Lehmann asserts that it is most likely Proto-Indo-European had an OV structure due to analysis of predominantly

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[179] Lehmann, Winfred. *Proto-Indo-European Syntax*. University of Texas Press, 1980, pp. 139.

Greek and Hittite with a postposed ordering system resulting in postverbal modifiers and particles with Fortson agreeing that Proto-Indo-European was most likely an SOV language.[180] However, Friedrich stated that Proto-Indo-European rather had no set syntax between various groups but Houben called this into question claiming that Friedrich's approach was biassed against OV structures.[181]

Transitivity and valence could also be seen as a factor for the spread of the weak dental preterite. Verbs shifting classes and losing endings may have then gained the weak ending through analogy as they shared the same valence as existing weak verbs. Subsequently, through further analogy, it could have then spread through the same phonological elements, such as vowels. Valence relates to the argument structure of a verb and is also related to transitivity, and the frequency of transitive or intransitive in a language.[182] The majority of causatives in Proto-Indo-European were derived from intransitive verbs but the *ja*-causatives themselves were transitive; however they were more frequently used in an intransitive manner in descended Germanic languages, especially Old English.[183]

In contrast to this, auxiliary verbs have no valence and in this situation *dhe* would have been an auxiliary verb due to its function in the periphrastic construction despite while being located in the position typically occupied by a particle if it is believed it was used postverbal.[184] The perfect aspect in Proto-Indo-European appears to have readily used auxiliaries in its formation and, as has been clarified, the aorist and perfect fell together meaning that the disposition for a

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[180] Ibid., pp. 30; pp. 165; Fortson, 2010, pp. 157.
[181] Houben, Jeffrey L. "Review of Proto-Indo-European Syntax: The Order of Meaningful Elements, by P. Friedrich", *Language*, vol. 54, no. 1, 1978, pp. 177; Friedrich, Paul. "Proto-Indo-European Syntax: The Order of Meaningful Elements", *Journal of Indo-European Studies*, 1975.
[182] García García, Luisa. "The basic valency orientation of Old English and the causative *ja*-formation: a synchronic and diachronic approach", *English Language and Linguistics*, vol. 24, no. 1, 2020, pp. 155.
[183] Lehmann, 1980, pp. 150; Ibid., pp. 157.
[184] Heltoft, Lars. "The regrammation of paradigms: the development of auxiliaries in Danish", *Acta Linguistica Hafniensia*, vol. 49, no. 2, 2017, pp. 260.

postverbal auxiliary or particle already existed resulting in *dhe being so readily used and adapted for the purpose of supporting the preterite tense formation.[185] The majority of Germanic, and a substantial amount of Indo-European, auxiliary verb research now focusses on *be* and *have* as these are the verbs which are predominantly used throughout the Germanic languages while *do* has moved into a 'do-support' system, particularly in English. While the development of this structure in itself is complex, the beginnings can be seen in Old English where the Germanic system of verb-second word order and full inflection began to erode allowing for the rise of *do* + verb structures in subsequent forms of English.[186]

By the time of the majority of early Germanic language attestation there was already a hierarchy of auxiliary verbs as well as certain periphrastic constructions that were still visible, particularly in Gothic.[187] In the instance of Gothic, there is both a periphrastic and synthetic passive while the other Germanic languages had moved to use only periphrastic passives involving auxiliary formations. As the predominant way of distinguishing verb type in the Proto-Indo-European period was morphological derivation, this can be seen as an inherited feature with the development of auxiliary systems as an innovation.[188] This auxiliary innovation in the Germanic languages, Heltoft claims, is evident from what can be observed in Gothic and that it was the predicative constructions that were the key factor in promoting more widespread auxiliary use with the periphrastic passive developing first and subsequently the periphrastic perfects.[189] Beyond this, some of the old Proto-Indo-European periphrastic constructions had broken down and lost certain features, including predicative characteristics. This led to supporting auxiliary structures being implemented with Heltoft claiming the perfect to be the first state to experience

[185] McFadden, Thomas; Alexiadou, Artemis. "Perfects, Resultatives, and Auxiliaries in Earlier English." *Linguistic Inquiry*, vol. 41, no. 3, 2010, pp. 390.
[186] Culicover, Peter W. "The Rise and Fall of Constructions and the History of English Do-Support", *Journal of Germanic Linguistics*, vol. 20, no. 1, 2008, pp. 3; 32; 38-39; 41-42.
[187] Heltoft, 2017, pp. 257; pp. 263.
[188] Ibid., pp. 263.
[189] Ibid., pp. 269.

such a shift.[190] While this is specifically in reference to predicative characteristics, it is still possible to look at such verb changes for evidence of previous changes that may have occurred due to the fact that many verbs, while they may have changed lexically, grammatically they still hold key information regarding Proto-Indo-European verb structure and syntax.[191] Taking this into account we can see that the disposition for supporting failing or fading structures with auxiliary verbs already existed within the Germanic languages and when factoring in the possibility of Proto-Indo-European postmodifying, it is also not unreasonable to believe that there could have been constructions where the auxiliary was placed after a main verb, to simulate a suffix or particle. If this was the case then *dhe* being used as an postmodifying auxiliary is not completely unreasonable and may have possibly been one of the first auxiliaries that the Germanic language branch specifically innovated.

While the weak verbs are formed from the derived verbs of Proto-Indo-European, it is also important to consider certain anomalies which have been recorded in early Germanic languages and what these suggest about the verb system which had developed before it as well as how the weak preterite acted as a safeguard against further verb system diversion for the evolving verb classes. One such anomaly is that of reduplication whereby, in Proto-Indo-European, it was used instead of or coupled with ablaut to express the preterite. This was done by the initial consonant + *e* being added to the beginning of the verb root.[192] Reduplication was still functional in the ablaut system leading into the Germanic period but began to deteriorate when sound changes split the *e*-group into five classes with four different ablaut patterns.[193]

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[190] Ibid., pp. 270.
[191] Lehmann, 1980, pp. 140.
[192] Ringe, 2017, pp. 261; pp. 277; Mailhammer, 2008, pp. 87.
[193] Ibid., pp. 89.

The reduplicating verbs in Germanic are Class VII and the most concise way of separating the division of the verbs found in Class VII is from Jasanoff, that the split is between ablauting verbs which (mostly) lacked reduplication and reduplicating verbs which (mostly) lacked ablaut.[194] However, grouping of these verbs can take many forms depending on the reason they are being studied and the approach used; while Jasanoff's groupings are a good framework with which to study Class VII as a whole, when it comes to identifying separate developments of Class VII across the Germanic languages, Mottausch's groupings clarify the verb class by which developments occurred in each language.

Mottausch identifies four types of Class VII reduplicating verb: type I is found in Gothic and East Nordic and these are the reduplicated verbs which retained the root stress. Type II is found only in Old English and is a specific set of verbs which reanalysed the reduplicated forms by associating the reduplicated consonant with the initial cluster and so the stress moved from root initial to the absolute initial position. Type III is found in West Nordic and Old High German, referred to as the 'infixing' type, it is characterised by the *r*-preterites found in these languages. Type IV is arguably the most predominant as it is found in most of the North-West Germanic dialects, these are defined by preterites which were reanalysed to follow the rules of Class VI.

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[194] Jasanoff, 2007, pp. 244.

|  | Type I | Type II | Type III | Type IV |
|---|---|---|---|---|
| Gothic | ✔ | | | |
| Old High German | | | ✔ | ✔ |
| East Nordic | ✔ | | | |
| West Nordic | | | ✔ | ✔ |
| Old English | | ✔ | | ✔ |

**Figure 3.17** *Types of Class VII verb and which language they were present in according to Mottausch.*[195]

In Old English, Type II was able to take hold primarily due to the original *r*-preterites, in particular *leort* (*lǣtan*, first singular preterite *leort*, 'let') and *reord* (*rǣdan*, first singular preterite *reord*, 'read'). Their original singular preterite forms displayed *o*-grade while the monosyllabic plural had a zero-grade (*\*lelōt/lelt-* and *\*rerōð/rerd-* respectively); these monosyllabic forms were preferred and generalised amongst other verbs with 'preferable' monosyllabic non-singular forms. These all had initial stress and certain consonant clusters formed which had to be reduced as some of these clusters were difficult to or impossible to pronounce, thus producing the observable Class VII verbs found in Old English attestations.[196] Coincidently, a number of these now monosyllabic verbs ended in dentals meaning that it would have been easier for them to eventually gain the weak dental resulting in the verb itself becoming either weak or an outlier. Of the examples provided by Adamczyk, one of the seven outliers can be found with a weak dental preterite in Modern English, *ondrǣdan* 'dread', while one is classed as a Class i

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[195] Mottausch, Karl-Heinz. "Die reduplizierenden Verben im Nord- und Westgermanischen Sprachen. Versuch eines Raum-Zeitmodelle", *NOWELE*, vol. 33, 1998, pp. 57; Adamczyk, Elzbieta. "Reduplication and the Old English strong verbs class VII", *Studia Anglica Posnaniensia*, vol. 38, 2002, pp. 28.
[196] Ibid., pp. 29.

weak verb despite having no additional dental suffix like that of 'dreaded', *rǣdan* 'advise, read'.

Three others of this group remained strong (*spātan* 'spit', *bēatan* 'beat', *lǣtan* 'let'), one fell out

of usage (lācan 'play'), and one can only be seen in certain reflexes of Modern English (*hātan*

meaning 'command' survives only in the archaic 'hight').[197]

In terms of a timeline in relation to Mottausch's groupings, type I is the oldest due to Gothic

attestation, type II took hold in the 5th Century while type III took hold in the 6th Century; however

by the 8th Century both had been overshadowed by type IV due to Frankish influence and

political prestige.[198]

Additionally, Class VII cannot be confidently claimed as descending from a Proto-Indo-European

verb group which poses further questions regarding its origin.[199] Beeler asserts that, of the Class

VII verbs, only a small number of them have convincing Proto-Indo-European etymologies and

the others have their origins in the late Proto-Germanic period meaning they were verb

innovations which needed to form a past tense.[200] As Gothic was the only language to retain

reduplication as a fully functional system, Gothic continued to establish reduplicating preterites

for these verb innovations while the other Germanic languages used Classes I to VI to form

newer strong preterites.[201] He does claim that Proto-Germanic must have used reduplication for

newer verbs as there are some remnants of reduplicated preterites found in Old Norse and Old

English but it was only Gothic which continued using the system for newer verbs.[202] Beeler also

comments on how even in Gothic only a small minority of verbs utilise both reduplication while

the majority use reduplication alone.[203] However, while this could suppose that when innovating

[197] Ibid.
[198] Ibid., pp. 31.
[199] Campbell, Alistair. *Old English Grammar*, Clarendon Press, 2003, pp. 302-307; Beeler, M. S. "Verbal Reduplication in Germanic and Indo-European." *Pacific Coast Philology*, vol. 13, 1978, pp. 7.
[200] Ibid.
[201] Ibid., pp. 7-8.
[202] Ibid.
[203] Ibid., pp. 9.

preterites it was easier to assign reduplication than ablaut it could also suggest that, if the reduplicates are inherited, then they were maintained as it was the only way to express their preterite.

However, it must be noted that Jasanoff finds the Gothic reduplication system to not be the exact reduplication system from Proto-Germanic, potentially supporting the idea that Gothic did use reduplication for innovation.[204] Despite Verner's Law, the Gothic reduplicates placed stress on the verb root rather than the initial reduplicated element, treating the reduplicated element as a prefix, unlike the reflexes found in Old Norse and Old English. This resulted in the reduplicated syllable remaining a separate phonological element in Gothic whereas the shift in stress in other Germanic languages made it easier to lose the original non-reduplicated element.[205]

The decline in reduplication in North-West Germanic was largely due to the initial stress and this lead to generalisation of weak forms as a simpler way to innovate forms than a, largely eroded, reduplication system.[206] In terms of why North-West Germanic could be seen to have rather rapidly lost the functioning reduplication beyond just the change in stress, Voyles upholds Van Coetsem's theory that the Class VII verbs throughout North-West Germanic all did originally reduplicate but were levelled with ablaut due to pressure from other strong verb classes, particularly Classes i, ii, and iii.[207] Adamczyk goes further and asserts that the use of Class VI to regularise Class VII was a continental development originally which then subsequently spread to Old English and Old Norse.[208] As for why it was Class VI which was used to level Class VII,

[204] Jasanoff, 2007, pp. 244.
[205] Adamczyk, 2002, pp. 26; Voyles, Joseph B. "Reduplicating verbs in North-West Germanic", *Lingua*, vol. 52, no. 1–2, 1980, pp. 92; Ball, 1968, pp. 165.
[206] Jasanoff, 2007, pp. 257.
[207] Voyles, 1980, pp. 90.
[208] Adamczyk, 2002, pp. 32.

she also asserts that it was the political influence of Frankish in the 8<sup>th</sup> Century as it had already readily implemented this levelling.

Rather than the situation with Class VI being used to level Class VII being uncommon, Voyles asserts that it is not unheard of for verbs to move between classes, though the change is asymmetric with strong verbs becoming weak more likely than the inverse (as was the case for Class VII in Old High German), or to even reverse the expected ablaut development.[209] As for the accent shift to the initial, this is traditionally dated to the 5<sup>th</sup> Century but did not affect Gothic and East Norse leaving them with the stressed root relic.[210]

As stated above, this construction only survived as a functioning system in Gothic but there are also remnant forms in Old English with some remnant elements in Old Norse. The archaic reduplicates are of particular note as it is characteristic of underived verbs which would come to form the basis of strong verbs in the Germanic languages; however, as these verbs developed they would come to resemble atypical weak verbs or would actually move class and become completely weak verbs depending on the language.[211] Whereas the gradual shift exhibited in Old Norse and Old English resulted in outliers from the reduplicated class surviving as atypical verbs, Old High German's approach to making the entire class weak resulted in bypassing the difficulties of individual reduplication problems, potentially posed by phonological changes.[212] By the point of Old High German attestation, Class VII had already been assimilated into weak verbs meaning only certain reflexes or unexpected forms show what class these verbs originally were. Jasanoff compares the Old High German *r*-preterites and *s*-clusters to those found in Old Norse to show the similarities but explains that, as there is no documented evidence of the

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[209] Voyles, 1980, pp. 91.
[210] Adamczyk, 2002, pp. 27.
[211] Jasanoff, 2007, pp. 246.
[212] Ibid., pp. 255.

reduplicated forms in Old High German, theories surrounding them and their assimilation can 'only be a guess'.[213] Jasanoff does suggest that there was once a period where -r- was a productive preterite marker meaning that it is possible that as this system faded and the reduplication was no longer evident allowing for the distinction of preterite forms, these former Class VII verbs were assimilated into the weak preterite due to its function as a safeguard against further verb system devolution and allowing for a certain amount of uniformity rather than attempting to assimilate them into another strong verb class with ablaut.

Old English is of particular interest as it is the only one of the North-West Germanic languages with a Class VII which, at least for some time, remained useful and continued to develop independently as the reduplication was often the only distinction between the present and preterite forms.[214] Rather than removing the non-stressed root of the reduplicated verb form early on in language development resulting in the vowel changes observed in Old Norse, for example, Jasanoff discusses how the Old English reduplicating verbs persisted for some time before eventually being compressed into monosyllabic forms.[215]

One possible explanation for why this formation remained identifiable in Old English and Old Norse is that these verbs were common and in regular use. Ringe provides a number of examples of verbs which still show signs of reduplicating reflexes across the three Germanic languages which retain some form of reduplication and as these are common verbs they would have been in regular usage within the societies of the time.

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[213] Ibid., pp. 246-247.
[214] Ibid., pp. 278; Hogg, Richard M., and R. D. Fulk. *A Grammar of Old English, Volume 2 : Morphology*. John Wiley & Sons, 2011, pp. 251.
[215] Ibid., pp. 264-265.

|  | Gothic | | Old English | |
| --- | --- | --- | --- | --- |
|  | Stem | Reduplicated Preterite | Stem | Reduplicated Preterite |
| call | *haitan* | *haíhaitun* | *ġehāta* | *-hehtun* |
| take | *fāhan* | *faífahun* | *fōn* | *fēngon* |

**Figure 3.18** *Comparison of Gothic and Old English forms.*[216]

|  | Gothic | | Old Norse | |
| --- | --- | --- | --- | --- |
|  | Stem | Reduplicated Preterite | Stem | Reduplicated Preterite |
| sow | *saian* | *\*saísoun* | *sá* | *seru* |

**Figure 3.19** *Comparison of Gothic and Old Norse Forms.*[217]

However, given that these are not the only reduplicating verbs which would have been in such common usage it raises the question of why other verbs may have lost their reduplication in favour of ablaut alone as all but one perfect, and therefore the strong verbs, reduplicated in Proto-Indo-European; the perfect *woid-/*wid-* ('know') was unreduplicating.[218] For example, *bītan* ('bite') had a reduplicating perfect in Proto-Indo-European and, so, a strong verb in the Germanic languages meaning that it had the potential to retain its reduplication as it is also a

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[216] Ringe, 2017, pp. 279.
[217] Ibid.
[218] Jasanoff, 2007, pp. 242.

common enough verb that it would have been used often enough that, like others, it would have had some difficulty changing form.[219] However, Jasanoff discusses a number of reasons why the unreduplicated forms may have been favoured over the archaic construction, including fast speech or multiple preverbs, which would have occurred by the point of Germanic language documentation.[220] Jasanoff proposes that these changes would have been gradual but would have proved to be more impactful than archaic constructions and led to some common verbs losing this reduplicated form while those which retained it only did so because of similar vocalisms between the past and present and the additional consonant was the distinguishing factor.[221]

However, it is also a possibility that unreduplicated forms were favoured for ease of use and pronunciation and this was the predictable end result with certain common verbs already having undergone the gradual process by the time of attestation. The reduplicating verbs which can be seen are simply those which have not yet completed the process and by using them in writing, they became established meaning they lasted longer than they perhaps would have had they not been written down as there was now documentation of how they 'should' be.[222]

The verbs which retained the reduplication also included a number of verbs which used only reduplication to mark their preterite meaning that the need for that construction to remain was greater than for verbs which had additional tense markers such as ablaut.[223] These verbs which retained reduplication also appeared to have maintained the construction as their vocalism in the preterite was too similar to the present and for ease of understanding the construction was retained while others had the same vocalism as non-ablauting verbs in the preterite, if not the

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[219] Ibid.
[220] Ibid., pp. 243.
[221] Ibid.
[222] Ibid.
[223] Ibid.

present, and so these retained their reduplication through analogy.[224] If this is the case then it also demonstrates why other common verbs, such as 'bite' in the example above, lost their reduplication far sooner as their present and preterite forms were already distinct enough through ablaut that they did not need the reduplication nor were they similar enough to other reduplicates to maintain the form through analogy.

Sverdrup states that, unlike other Indo-European languages, reduplication was no longer functional or necessary within the Germanic branch and Gothic only retained the reduplicated forms to compensate for strong preterite without ablaut.[225] He also points out that while Old Norse does not use the reduplication system as a whole, it does retain the vowel changes indicating that the verbs displaying these developed from reduplicated forms.[226]

The reduplicated form does also raise questions regarding the preservation of archaic verb forms as well as why some languages seem to preserve more than others. It is necessary to remember that the manuscript witnesses for the Gothic Bible are dated to between the 5th and 8th Centuries, though this also raises the question of how faithfully they produce Wulfia's 4th Century text, with the next Germanic attestation being inscriptions written in older runes, which are dated to between the 2nd and 7th Centuries. The Gothic texts are substantial and provide a great insight into the Gothic language of the time while the older rune stones are comparatively much shorter and, therefore, cannot show us as many complexities of the language at the time. This means that the language of the older rune inscriptions may have had functioning reduplication like the Gothic of the time but as the inscriptions are not as long as the Gothic Bible, there is not sufficient evidence from the time period it is not currently possible to know. Meanwhile, the reduplication reflexes we can see in Old Norse and Old English are centuries

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[224] Ibid.
[225] Sverdrup, 1928, pp. 299.
[226] Ibid., pp. 325.

after the Gothic texts suggesting that it is possible that the gradual removal of reduplication may have always been relatively unavoidable for the Germanic languages and Gothic may have also lost its reduplication had it continued developing as the other Germanic languages did.

The importance of reduplication in relation to the weak dental preterite cannot be ignored as in a number of cases, former reduplicating verbs became weak verbs. In Old Norse, all but one reduplicating verb became weak while in Old High German, all of them became weak.[227] Even those which exhibited some form of ablaut would gain the dental preterite while atypical verbs would also be assigned a weak preterite seemingly for ease of use. The reason for this development appears to be largely unknown but could be analogical for the most part; Jasanoff gives the Old Norse example of *sera* which was reanalysed into a atypical weak verb due to the root final *-r* plus *-a* in the first person singular being analysed as analogous to the *-ða* at the end of the dental of the first person singular, for example *talða*. From here, the *-r-* simply replaced *-ð-*, the plural endings fell into the shifted paradigm well, and the second and third person singular endings also shifted over time to inflect *sera* now as a pseudo-weak verb.[228]

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[227] Jasanoff, 2007, pp. 246-247; pp. 277.
[228] Ibid., pp. 261.

|  | Old Norse (sá) | | Old Norse (telja) | Gothic (saian) |
|---|---|---|---|---|
|  | historical | reanalysed | | |
| 1st sg. | *sera* | *sera* | *talða* | *saisō* |
| 2nd sg. | *\*serast* | *serir* | *talðir* | *saisōst* |
| 3rd sg. | *\*sera* | *seri* | *talði* | *saisō* |
| 1st pl. | *serum* | *serum* | *tǫlðum* | *saisōum* |
| 2nd pl. | *seruð* | *seruð* | *tǫlðuð* | *saisōuþ* |
| 3rd pl. | *seru* | *seru* | *tǫlðu* | *saisōun* |

**Figure 3.20** *Comparison of the preterites of Old Norse* sà *and* telja *alongside Gothic* saian.[229]

The question of why the verbs became weak as opposed to remaining strong and gaining ablaut remains but seems to have been largely due to analogy from other weak verbs and their phonological structures rather than the phonological signifiers of semantic groups, such as *\*-jan-* for the causatives, which Proto-Indo-European favoured.[230]

By the point of the majority of Germanic language attestation, reduplication as a functioning preterite marker was fading and so what often appeared as monosyllabic stems needed a functioning preterite marker. As previously discussed, in the proposed timeline the preterite presents would have already been assimilated into the dental preterite by this point and the dental preterite was a functioning system. This system can be seen to have extended to once

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[229] Ibid.
[230] Ibid., pp. 257.

again incorporate a group of underived verbs in need of a preterite, acting almost as a grammatical safeguard against further diversion.[231] However, the question remains: by this point of Germanic language development, was the weak system simply the most functional and easiest to assign to any outlying verb which did not have a preterite via diffusion or analogy, or did the old system of semantic indication found in Proto-Indo-European still have any bearing on the phonology and morphology of the verb constructions?

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[231] Ringe, 2017, pp. 278-279

## 3.5  The -þ Ending

Another exception to the dental preterite stemming from *dhe that must also be accounted for is a certain group of seemingly atypical endings found in the Germanic languages, predominantly Gothic and Norse. These verbs have endings which go back to -þ and cannot be related to an Proto-Indo-European *dh; for example, East Norse skulla from Proto-Germanic *skulþa and Gothic kunþa from Proto-Germanic *kunþa.[232] However, supposed explanations have been put forward to explain these endings with both Sverdrup and Ringe assigning them to a Germanic to-particle while also recognising the phonological issues this ending raises regarding the development of the periphrastic construction theory.[233] Ringe goes on to give possible varied endings for Class ii and Class iii verbs that indicate how the -þ may have been used alongside another dentals in other dialects or languages, assigning o-nd/nþ to Class ii and ja-nd/nþ to Class iii,[234] but does recognise that the construction is considered unexplained but claims that it is likely a pre-Verner's Law structure that had survived in some verb forms.[235] If this is the case then it likely explains why there is more evidence for it in Gothic than the other Germanic languages. As previously discussed, Gothic retained pre-Verner's Law root stress which enabled it to maintain a functioning reduplication form. Gothic is also the oldest Germanic language with substantial attestation that can be examined for particular grammar elements while early runic inscriptions of the time are relatively few and short in comparison. If the other Germanic languages had retained more reduplication or the -þ ending it may have been in the same period as Gothic but by the point that there is significant attestation for these languages, these particular elements had been levelled or fallen out of use.

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[232] Must, 1951, pp. 124.
[233] Ibid.; Ringe, 2017, pp. 188.
[234] Ibid., pp. 284-286.
[235] Ibid., pp. 291.

# 4  Conclusion

In conclusion, the origins of the preterite tense can be seen in Proto-Indo-European and this evidently carried over into the daughter languages, with *dhe being the most likely origin in regards to the Germanic dental preterite. However, while the relationship between the morphology and semantics of the verbal system was obvious in Proto-Indo-European, this facet did not carry over, at least in the case of the Germanic languages. In moving from a system where inherited Proto-Indo-European aspect categories were reanalysed to the point where the relationship between form and function, especially in regards to ablaut, had become opaque, new compensatory mechanisms had to be introduced but these were also reanalysed from existing structures. These mechanisms were used as a safeguard against further disparity by incorporating outlying verbs and maintaining them in a single structure for ease and uniformity compared to the ablaut system which had become far harder to recognise and regulate due to various sound changes.

However, what can be observed is that the predisposition for the construction to establish itself and spread existed not only for the periphrastic preterite but other periphrastic constructions in various Proto-Indo-European daughter languages even when they had no or limited contact. While certain auxiliaries can be observed to be utilised for specific constructions, such as with the resultative, the exact reason for specifically *dhe, a Proto-Indo-European imperfective, being used remains to be seen but was clearly significant enough for *dhe to be the only imperfective to survive.

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