National and Kapodistrian University of Athens
Department of English Language and Literature

MA Programme "Linguistics: Theory and Applications"

The Influence of Greek on the Gothic New Testament in relation to Proto-Germanic:

Corpus-driven Evidence on Written Contact

Sofia Chionidi

ID number: 7563112100016

Supervisor

Nikolaos Lavidas

Supervising committee

Michalis Georgiafentis

Vassiliki Nikiforidou

Athens

January 2023

Declaration

Με πλήρη επίγνωση των συνεπειών του νόμου περί πνευματικών δικαιωμάτων, δηλώνω ρητά ότι η παρούσα μεταπτυχιακή διπλωματική εργασία αποτελεί αποκλειστικά προϊόν προσωπικής μου εργασίας, δεν προσβάλλει κάθε μορφής δικαιώματα διανοητικής ιδιοκτησίας, προσωπικότητας και προσωπικών δεδομένων τρίτων, δεν περιέχει έργα/ εισφορές τρίτων για τα οποία απαιτείται άδεια των δημιουργών/ δικαιούχων και δεν είναι προϊόν μερικής ή ολικής αντιγραφής, οι πηγές δε που χρησιμοποιήθηκαν περιορίζονται στις βιβλιογραφικές αναφορές και μόνον, και πληρούν τους κανόνες της επιστημονικής παράθεσης. Τα σημεία όπου έχω χρησιμοποιήσει ιδέες, κείμενο, αρχεία ή/ και πηγές άλλων συγγραφέων, αναφέρονται ευδιάκριτα στο κείμενο με την κατάλληλη παραπομπή και η σχετική αναφορά περιλαμβάνεται στο τμήμα των βιβλιογραφικών αναφορών με πλήρη περιγραφή. Αναλαμβάνω πλήρως, ατομικά και προσωπικά, όλες τις νομικές και διοικητικές συνέπειες που δύναται να προκύψουν στην περίπτωση κατά την οποία αποδειχθεί, διαχρονικά, ότι η εργασία αυτή ή τμήμα της δεν μου ανήκει διότι είναι προϊόν λογοκλοπής ή προϊόν συγγραφικού έργου επ' αμοιβή.

Υπογραφή
Σοφία Χιονίδη

ACKNOWLEDGEMENTS

Abstract

The present study investigates verbal constructions in the Gothic New Testament text, *Epistles to the Corinthians II:12*. The corpus compiled is compared to the Greek source text and diachronic retranslations in English. Gothic is the only surviving language of the East Germanic branch, and the oldest within the Germanic family, as it dates back to the 4th AD. Although such an old language can provide insight into the typology of Germanic, the available manuscripts are limited; Biblical translations of the New Testament and fragmentary Old Testament excerpts are the only existing texts.

As the text was directly translated by the bishop of the Goths, Wulfila, the case of Gothic becomes a case of written contact (i.e., through the translational process) and questions regarding the possibility of linguistic transfer, which could lead to diachronic grammatical change, arise. Therefore, the texts under investigation are completely annotated and examined through two case studies. Firstly, a computational study is conducted on the *LightSide* machine-learning software to distinguish the most typical Gothic and English (i.e., in older and later translations) verbal constructions. Secondly, the latter is compared to the Greek New Testament. The typological deviations are examined in a phrase-matching, contrastive way on the *AntConc* corpus-building software. The results are quantified, followed by subsequent statistical observation.

The results show slight similarities between the Gothic and English corpora under examination, concerning the expression of voice/diathesis and the typological preferences of the verbal constructions, as well as significant deviations from the Greek equivalent constructions. The prevalent typological patterns show the preference of Gothic for periphrastic translation of the Greek passive constructions, which is less observed in the equivalent English translations. The findings insinuate that such deviations can contribute to evidence of the parallel grammar systems that are diachronically manifested by written contact and can bear diachronic implications to the evolution of the languages involved. Statistical analysis within a contrastive approach, along with the examination of quantified data, can highlight typological patterns that were previously underexplored. Future studies could extend the scope of research to other intralingual Germanic

translations in comparison to Gothic, in order to establish evidence on their typological relations.

Περίληψη

Η παρούσα μελέτη διερευνά τη ρηματική σύνταξη στο Γοτθικό κείμενο της Καινής Διαθήκης, *Επιστολές στους Κορινθίους II:12*, τις οποίες συγκρίνει με το Ελληνικό κείμενο-πηγή και τις διαχρονικές αναμεταφράσεις στα Αγγλικά. Η Γοτθική είναι η μόνη σωζόμενη γλώσσα του Ανατολικο-γερμανικού κλάδου και η αρχαιότερη της Γερμανικής οικογένειας, καθώς χρονολογείται από τον 4ο μ.Χ..

Παρόλο που μια τόσο παλιά γλώσσα μπορεί να διαφωτίσει την τυπολογία της Γερμανικής, τα διαθέσιμα χειρόγραφα περιορίζονται στις βιβλικές μεταφράσεις της Καινής Διαθήκης και σε μερικά αποσπάσματα της Παλαιάς Διαθήκης, τα οποία προέρχονται από λέξη-προς-λέξη μετάφραση την οποία πραγματοποίησε ο επίσκοπος των Γότθων, Wulfila, και καθιστούν τη Γοτθική περίπτωση 'γραπτής επαφής' (αλληλεπίδραση μέσω της μεταφραστικής διαδικασίας). Κατά συνέπεια, προκύπτουν ερωτήματα σχετικά με τη δυνατότητα γλωσσικής μεταφοράς, η οποία θα μπορούσε να οδηγήσει σε διαχρονικές γραμματικές αλλαγές. Επομένως, τα υπό διερεύνηση κείμενα εξετάζονται μέσα από δύο επιμέρους μελέτες. Πρώτον, διεξάγεται μια μελέτη με το λογισμικό μηχανικής μάθησης *LightSide*, ώστε να διακριθούν χαρακτηριστικές Γοτθικές και Αγγλικές (σε παλαιότερες και μεταγενέστερες μεταφράσεις) ρηματικές δομές. Δεύτερον, τα αποτελέσματα συγκρίνονται με το Ελληνικό κείμενο της Καινής Διαθήκης. Οι τυπολογικές αποκλίσεις εξετάζονται στο λογισμικό *AntConc*, αντιπαραβάλλοντας τις αντίστοιχες φράσεις. Τα αποτελέσματα ποσοτικοποιούνται και ακολουθούν στατιστικές παρατηρήσεις.

Τα δεδομένα δείχνουν μικρές ομοιότητες μεταξύ του Γοτθικού και των Αγγλικών κειμένων, όσον αφορά την εκφορά της φωνής/διάθεσης και των τυπολογικών προτιμήσεων στη ρηματική σύνταξη, καθώς και σημαντικές αποκλίσεις από τις αντίστοιχες Ελληνικές ρηματικές δομές. Τα τυπολογικά σχήματα που προκύπτουν δείχνουν προτίμηση της Γοτθικής για περιφραστική μετάφραση των δομών που στα Ελληνικά εκφέρονται με παθητική, φαινόμενο που παρατηρείται λιγότερο στην αντίστοιχη μετάφραση στα Αγγλικά. Από τα δεδομένα συνάγεται ότι οι αποκλίσεις αυτές μπορούν να αποτελέσουν ενδείξεις των παράλληλων γραμματικών συστημάτων που σχηματίζονται μέσω της 'γραπτής επαφής' και ενδεχομένως έχουν διαχρονικές επιπτώσεις στην εξέλιξη των εμπλεκόμενων

γλωσσών. Μέσω στατιστικής ανάλυσης και με αντιθετική αντιπαραβολή ποσοτικών δεδομένων μπορεί να έρθουν στην επιφάνεια τυπολογικά μοτίβα που προηγουμένως δεν είχαν διερευνηθεί. Μελλοντικές μελέτες θα μπορούσαν να επεκτείνουν το εύρος της έρευνας σε διαχρονικές ενδογλωσσικές μεταφράσεις σε σύγκριση με τη Γοτθική για να αποδείξουν τις τυπολογικές τους σχέσεις.

Λέξεις-κλειδιά: Γοτθικά, γραπτή γλωσσική επαφή, αναμετάφραση, Αγγλικά, Ελληνικά, διαχρονικότητα, σύνταξη, ρήματα, τυπολογία, σώμα κειμένων, στατιστική

Contents

Chapter 1
The Background and Purpose of the Present Study

Chapter 2
The Materials and Methodology of the Present Study

Chapter 3
The Results of the Present Study

Chapter 4
Discussion

Chapter 5

Figures and Tables

Chapter 1
The Background and Purpose of the Present Study

1.1 Introduction

Remnants of the Gothic language are the only surviving evidence of the East Germanic branch. Biblical translations of the Greek New Testament date back to the 4th century AD and constitute evidence of an almost word-to-word translation. Scholars have long been divided on whether the linguistic features of Gothic are authentic or mere mimicry of the Hellenistic Greek source text. On this account, research on Gothic grammar, morphology, and syntax dates back to the 19th century.

The socio-political situation of the time of the Christianisation of the Goths, which was characterised by extensive imperialism, established the Greek *Koine* as a milestone medium of communication and transfer of religious ideas, making it the *Lingua Franca* of the era, ushering in the translation of important religious and economic texts into Greek (Darchia 2012). Such translations constitute evidence of written contact, encompassing borrowings and transfer, and can even account for language change, which has drawn the interest of scholars within the field of Diachronic Linguistics.

In addition, translation within the context of constant interaction with other peoples was inevitable, and various types of 'normalisation' of the differences from one culture or language to another called for adaptations, such as code-switching or loan translations. As a matter of fact, Wulfila who translated the Greek bible into Gothic is believed to be bilingual (Ratkus 2009a). It is noteworthy that the grammars of two languages in contact exist in parallel and influence one another. This idea starting as 'The Competing Grammar Hypothesis' has developed in Lavida's *Grammatical Multiglossia,* suggesting that the co-existence of linguistic systems in contact can have an impact visible on both the translated and the non-translated text, as well as in intralingual translations (Lavidas 2022). Drawing from this theory to construct the foundations of the present study, I aim to analyse the influence of Greek on Gothic. I also intend to emphasise the

importance of the comparison to translations in other Germanic languages, focusing on English for my current study.

My hypothesis is that typological similarities and deviations between Gothic and Greek can add to evidence of written contact by showing patterns examined in a contrastive, computational manner. Therefore, I will attempt to unravel whether and to what extent contact between Gothic and Greek has caused grammatical transfer. In this light, morpho-syntactic differences can attest to Gothic idiomaticity.

On this account, I also hope to answer whether morpho-syntactic elements in Gothic display alterations due to transfer from Greek or seem to be closer to other Germanic constructions, that is, English. Finally, it is my goal to answer whether the existence of parallel grammars is manifested, thus, accounting for the effects of language contact that bears implications for the diachrony of Germanic languages.

The data drawn from the Greek Bible and, more specifically, the *Majority Text,* which seems to be closer to the Gothic translation (Ratkus 2009a), will be compared to the Gothic translation of the New Testament. Results from the examination of evidence from the parallel corpus will be compared to earlier and later English translations adopting a contrastive approach. The corpus will be examined through different computational and corpus tools. This way, I can study parallel constructions in digitalised annotated texts. Furthermore, to establish the validity of my results I will quantify the data, classifying them based on the frequency of their occurrence.

Before delving into the particular study, it is imperative to introduce an overview of the historical background and previous research on the matter to highlight the importance and motives behind investigating Gothic morpho-syntax cross-linguistically. The first part of this paper will be devoted to an extensive introduction to Gothic typology and the second part will focus on my comparative study.

1.2 The Origin and Language of the Goths

Jordanes' *Getica*, written in the 6th century AD, describes the history of the Gothic tribe surrounded by constant movement and wandering. Although they were a Germanic tribe, their place of origin is rather controversial, as they are believed to have descended either from Scandinavia (Kulikowski 2011) or from the land around river Vistula, which now belongs to present-day Poland and its borders with Ukraine (Heather 2010). The Goths separated around the Black Sea regardless of their common starting point. Those that occupied land across the Balkan Peninsula and the shores of the Pontic Sea are known as Ostrogoths, whereas the Goths that spread West of the Black Sea and settled close to the Roman Province Dacia, are known as Visigoths.

The areas of settlement were not the only segregating factor that distinguished the Gothic tribes, as their language occurred in two dialects as well; Ostrogothic developed in Eastern Europe and later in Italy, and Visigothic developed in East Central Europe.

The Gothic language belongs to the East Germanic branch of the Indo-European language family and is invaluable for the study of diachrony, as Gothic is the oldest attested Germanic language, preceding other Germanic languages almost by four centuries, which means that it may be closer to Proto-Germanic bearing features of the Proto-Indo-European (PIE) (Braune 2020). Its importance lies in the fact that Indo-European is one of the biggest language families, thus, input for their inheritance can answer omnipresent questions about the history and development of ancient and modern languages. Notwithstanding the linguistic importance of the Gothic inheritance, the fact that all modern knowledge of Gothic comes from the translation of the Bible perplexes endeavours for analyses and reconstruction.

The translation of the Bible into Gothic was a strenuous work undertaken by Ulfilas or Wulfila, a bishop who translated the religious Christian texts from Greek into Gothic, probably during the 4th century AD, from which only fragmentary copies have survived to this day.

However, attestations of the Gothic language shed light on the particularities of Biblical Gothic, which are claimed to be different from another Gothic dialect,

Crimean Gothic, spoken by the Goths settled in Crimea until the 18th century. The only linguistic evidence is derived from letters sent by a Flemish ambassador, Ogier Ghiselin de Busbecq, which include a list of a limited number of words and a song in Crimean Gothic; unfortunately, those written records are assumed to bear some typological errors due to the writer's native language, Dutch (Nielsen 2017). Several scholars have attempted to investigate this different dialect, Crimean Gothic in parallel with Wulfila's biblical Gothic to gain insight into the East Germanic branch (Costello 1973, Stearns 1978, Stiles 2005, Harbert 2007, Ganina 2011).

The examples below can shed light on some differences between Biblical and Crimean Gothic:

(1) *reghen* **CRIM GO** *rign* **BIBL GOTH**

(2) *vvurt* **CRIM GO** *waurþi* **BIBL GOTH**   (Nielsen 2017)

As can be seen in example (1) Crimean Gothic has kept Germanic /e/, whereas in Biblical Gothic it has been replaced by /i/. What is more, /u/ before /r/ has been preserved, whereas in Biblical Gothic it has become /ɔ/ (example 2).

1.2.1 Gothic Texts

An era of movements and migration signals a multilingual and multicultural context, wherein the contact with neighbouring cultures urged the process of the conversion of the Goths to Christianity, which was a long and complex process, and some Gothic groups followed different paths, thus, different dogmas, such as *Homoianism* and *Niceanism* (Wolfe 2016).

The Gothic Bible was not only used by the Goths living in the same area as Wulfila, but Visigoths and Ostrogoths are believed to have carried it in migrations towards western regions, such as Spain and Italy, and was maybe used by other tribes, such as the Vandals (Heather 2010).

Gothic studies are at a disadvantage, as the Old Testament has no surviving records but for a part of 'Nehemiah' (in 'Codex Ambrosianus'). However, a respectable portion of the New Testament Gothic translations is available and valued as copies of Wulfila's original manuscripts.

The manuscripts offering insight into the Gothic language encompass six codices. More specifically, 'Codex Argenteus' is the most well-known manuscript as it is the best preserved and contains long fragments of the Gospels; the Greek source text has a strong presence in the Gothic translation, as the text involves several loan translations and borrowings, as well as syntactic similarities with the Greek text (Falluomini 2006/2015). Moving to the less-known codices, 'Codex Ambrosianus' and 'Codex Taurinensis', research has shown that they include a limited number of the New Testament Gospels and Epistles. It is noteworthy that they include the only surviving fragment from the Old Testament, 'Nehemiah' and the second longest Gothic text following Wulfila's Bible translation, 'Skeireins', which is merely a five-part commentary.

Although of limited length, 'Codex Gissensis' and 'Codex Carolinus' constitute important heritage for linguistic research; 'Codex Gissensis' encloses fragments from the Gospel of Luke, and 'Codex Carolinus' contains parts of the 'Epistle to the Romans'. Both texts are bilingual, containing a Gothic and a Latin version, which facilitates aligned studies between the text used as the source and the translated text.

'Fragmenta Panonica', or the 'Hács-Béndekpuszta fragments' owe their name to the place where they were found. According to Bollók (2016), although scholars were aware of the existence of this inscribed, folded lead sheet before, recent investigation has revealed its function as an amulet shedding light on Christian communities living in the "Carpathian Basin", and the spread of the Gothic religious texts beyond their lands.

The fewest portion of biblical fragments is found in 'Gotica Parisina', including only Gothic names (Zironi 2009) and 'Gotica Vindobonensia', which comprises only words and numerals from the 'Genesis' and the Gospel of Luke. Falluomini (2010) highlights the importance of this rather short evidence, as some linguistic features reveal differences with the Gothic 'Vorlage'[1] and might even point to the location of Visigothic Gaul (Falluomini 2020).

---

[1] The original-language version of a text which is then translated is called the 'Vorlage' of that translation.

The most recent discovery, within the field of Gothic manuscript research, concerns 'Codex Bononiesnsis' found in Bologna in 2009. Gothicists have demonstrated particular interest in the palimpsest, as it illuminates Gothic free speech involving a narrator, transmitting citations from various books from the Old and New Testament, which are thought to be part of a sermon (Finazzi and Tornaghi 2014, Falluomini 2014, Schuhmann, 2016).

1.3 Previous Studies on Gothic Translations and their Relation to the Greek Source Text

The Germanic tradition of translation is said to have 'paradoxically started with a dead language', Gothic. Such remains offer invaluable information related to the linguistic development of Germanic, although historical attestations show that, until the medieval period, only religious translations and accompanying commentaries were in the spotlight of such endeavours (Kristmannsson 2019: 358). Available remnants of the Gothic language are almost exclusively translations of the Greek New Testament, supposedly carried out by Wulfila, the Goth who appears to be the translator of the biblical texts in Gothic and the inventor of the Gothic alphabet given the runic writing system of the time. Although there is an extensive bibliography that even nowadays remains faithful to the belief that the Gothic translation constitutes the fruit of one person's labour alone (Kleyner 2019), Ratkus (2018a) revitalised doubts expressed in older studies regarding the authorship of the Gothic Bible and supports that the translation is a collective effort, thus, the lack of uniformity. It is commonly accepted that such stylistic characteristics function as a rather compromising way to reconcile syntactic differences while maintaining semantic fidelity to the source text. It is noteworthy that any reference to Gothic concerns solely Biblical Gothic instead other previous or minor variations, such as Crimean Gothic, as was previously clarified. Nevertheless, their use of any other variation was eliminated due to the extended spread of Christianity. As a result, the language expressing the religious texts was integrated into everyday life as well, and thus, prevailed (Finazzi and Tornaghi 2014).

1.3.1 The Greek Source Text

It is highly likely that not having a specific source text in Greek, which scholars can refer to, creates a controversy hovering over the most appropriate Greek version researchers should use as a comparator to Gothic. Ratkus (2009a), who attempts to solve this equation, concludes that a revised compilation of the Byzantine texts, called the *Majority Text* (Robinson and Pierpont 2005), statistically constitutes the most trustworthy representation of the original.

The importance to establish a common referent for the field of Gothic research is due to Gothic being the only potential bearer of evidence for Proto-Germanic typology that can add to the link between the Proto-Indo-European reconstructions and the Early Germanic languages. It is undeniable, however, that the Greek source text has influenced the Gothic translation to such an extent that there is no extant evidence of the latter's idiomatic language use. We should acknowledge, though, that morpho-syntactic deviations from the source text have attracted the interest of many scholars, who hope to shed light on the peculiarities of the Gothic language.

1.3.2 Comparing the Greek to the Gothic Text

As will be delineated, Gothicists have extensively examined both verbal constructions and lexical morphology. At the lexical level, morphology has been examined in terms of the roots of words and their subsequent development. Snaedal (2005/2013) was the first to undertake the laborious work of compiling an extensive 'concordance list' of Biblical Gothic lexical items, showing the authenticity of some suffixes in the Gothic language. His work is still used as an indispensable research tool leading to important subsequent findings; Snaedal (2015a/2015b) further investigates compound words, which according to his study, are directly derived from the Greek source text, and any instances accounting for the opposite are assumed to be 'scribal errors' (Snaedal 2015a: 88). Albeit a verbatim translation is more than possible in the case of the Gothic New Testament, innovation in the lexical morphology of a small number of instances allows us to etymologically grasp the Germanic roots of nouns (Casaretto 2010, Snaedal 2016), and of the articles often being grammaticalised, with a view to retrieving referents (Pimenova 2017).

What is more, a primordial aspect in the Gothic Bible research constitutes the word class of adjectives, which has been extensively studied both for their morphological and syntactic properties (Ratkus 2009a/2009b/2018b/2018c).

Under this spectrum, Ratkus (2009b) initially attempted to discern inflectional categories that draw the line between strong and weak adjectives affecting morpho-syntax. Within the use of adjectives as modifiers, a case study involving the bare stem *-ata* illustrates the difference between strong inflections and the bare stem, which vary between Greek and Gothic, without necessarily affecting the syntax. What is more, it is assumed that the Germanic adjective inflection is not fully pronominal (Ratkus 2015/2016).

Moreover, adjectives tend to star in lexical innovations, as well as deviations from the Greek source text considering that several nouns, participles and pronouns are rendered into adjectives in the Gothic translation and do not correspond to any forms in other versions of the Biblical (i.e., the Byzantine, Alexandrian, or pre-Vulgate Latin) texts which strengthen the evidence for authentic language occurrence (Falluomini 2015, Ratkus 2016).

1.3.2.1 Differences at the Lexical level: Adjectives

Within the framework of adjectival morphology and functions, meaning is another important constituent varying across the Greek and Gothic texts. In the New Testament, a great number of adjectives with 'diminutive' meaning is attested. The nominal inflections in Greek endow the text with several different nuances, thus, diminutives can also change the core meaning of entire biblical passages. However, Gothic seems to disregard subtle semantic differences and maintains the 'diminutive' sense only when referring to the young. As can be deduced, major morphological and semantic differences become evident through inflectional differences, albeit syntax might not be affected, which presumably accounts for a translational strategy which is faithful to the source text, and at the same time attempts to convey intelligible meaning in the target language. Undoubtedly, several lexical cases in the Gothic Bible diverge from the Greek text but it would be almost impossible to account in an extant way for every case, especially when there are no other texts in the Gothic language to present natural language use.

1.3.2.2 Differences at the Verbal Level

Comparative studies on the Gothic Bible translation encompass verbal constructions as well. Research has shown that Gothic generally follows an OV[2] pattern, although VO exceptions are rather frequent (Tamašauskaitė 2013). As can be deduced, the linear, word-to-word translation attested in most of the cases presented so far is not always present in verbal constructions. A simple example of such a case consists in various pleonastic prepositions which accompany verbal phrases in the Gothic text, resulting in a rather unnatural, flamboyant style (Goetting 2007). Further deviations from Greek have been extensively sifted through, as they can contribute to the reconstruction of the Proto-Germanic constructions and even be compared to Proto-Indo-European syntax.

An overview of relevant literature reveals changes in the Gothic translation, including the Greek genitive, corresponding to a dative absolute in Gothic, making one assume that absolute constructions can be an idiomatic figure in Gothic (Crellin 2013), and even variation between action and state verbs, whereby non-

---

[2] Miller (2019) showcases deviations from the Greek text that can account as evidence for authentic Gothic peculiarities, such as placing copular or auxiliary verbs at the end of a clause.

action verbs appear to be translated using past tenses, retaining a coherent semantic meaning in the New Testament.

Luraghi *et al*. (2021) have offered an exquisite work on the passive voice in ancient Indo-European languages, among which Gothic and their Greek roots on such verbal constructions are referred to. Within Germanic languages, solely Gothic retains finite verbs stemming from the PIE middle that function as passives. Germanic languages, even Present Day English, commonly express the passive voice employing the past participle (passive) accompanied by various auxiliaries, namely, having lost their middle inflection. The different auxiliaries employed depend on the aspect one needs to express. In this light, the different auxiliaries employed to translate Greek passives in Gothic depend on the subtle semantic differences[3].

The classification of voices is an imperative distinction. Verbs in Gothic have two voices, active and passive, but Gothic verbs are extremely important as they preserve the Indo-European mediopassive as a synthetic passive. Periphrases possess a primordial role in Biblical Gothic grammar and do not always correspond to the same forms in Greek.

In addition, deviations from the Greek New Testament encompass Greek perfect forms; according to Andrason (2010), they are translated into predicative adjunct constructions expressed by means of participles, especially in order to express resultative meaning. Katz (2021) also notes that perfect passive constructions are also able to present a *result* state. The 'have perfect' construction, though, is a well-known product of the Latin influence on Gothic, which became grammaticalised, obtaining distance from the meaning of physical possession (Drinka 2011). It is thereby deduced that verbal constructions are a common element of Germanic grammar (Miller 2019), capable of executing several functions and following a rather crucial development along with the evolution of the typology of Germanic languages.

---

[3] The auxiliary verb employed in the Gothic translations can affect aspectual nuances; namely, passives formed periphrastically, embodied by *wisan* 'be', relate to stative passive voice (*Zustandspassive* as is known in German Grammar), whereas those built with *waírþan* 'become' express dynamic passive voice (*Vorgangpassive*) (Jones 2009). The importance of the present study lies in *wisan*-passives translating Greek perfect passives, as opposed to *waírþan* passives are used to translate Greek aorist passives (Luraghi *et al.* 2021)

The discussion of passive voice is an indispensable element of periphrastic constructions, considering the following controversy over their form as well. Ratkus (2019) sifted through variations in the periphrastic and synthetic forms, excluding past forms whereby, in alignment with the Germanic grammar, periphrastic constructions are expected to occur. Furthermore, he analysed forms with similar functions to clarify whether divergence from the Greek source text aims to enhance the stylistic features of the text or morphosyntactic functions. The decline of the inherited passive voice in a synthetic form and the subsequent development of periphrastic passive voice in Gothic calls for further examination, as results seem to be rather ambiguous. Of course, the intriguing case of the Gothic passive form has attracted the interest of more researchers.

Kleyner (2019) claimed to have encountered middle value in periphrastic passive constructions. Her results seem rather arbitrary, as specific criteria for the middle value are not adequately presented. By contrast, Ratkus (2020) highlights the importance of consistent criteria to view voice as a syntactic category convincingly concluding that the examples proposed were mere passive constructions. Such a confrontation brings what seems to be still an important aspect of diachronic research in the foreground; namely, it is imperative to establish clear criteria and employ a statistical or even computational model of analysis.

Overall, the periphrastic form of verbs in past tenses expanded to non-past periphrastic forms adding to the syntactic and semantic analysis, which has been enriched as they gained in productivity and replaced synthetic forms. An extensive investigation with contemporary tools in terms of the functions and differences between periphrastic and synthetic constructions needs to be realised, as evidence is still based on rather dated work.

1.4 The Gothic Alphabet

The Gothic alphabet is tackled in many studies as a controversial issue; many researchers believe that Wulfila who translated the Bible into Gothic created letterforms that were inspired by the Latin and the Greek alphabets and that the previous writing system most likely included East Germanic runes (Mees 2002, Raschellà 2011).

The scholarship also suggests that there are similarities between the Gothic letters created by bishop Wulfila in the middle of the 4th century AD for his Bible translation and the Slavonic Cyrillic alphabet developed in the 9th century. This can signal both Greek influence but also the effect of the Christianization process which was imposed by the Byzantine Empire (Lazarova 2011), rendering the Greek language a kind of *Lingua Franca* of the times. Of course, at the root of such ambivalence also lies the unknown origin of older writing systems, such as the Runic or the Phoenician (Miller 1994/2019).

In an attempt to examine the form and phonological properties of the Gothic alphabet with a view to reaching potential linguistic reconstruction, researchers have focused on exhaustive analyses and speculations of each letter dating back to the 19th century and still continuing to this day (Ganina 2007, Seebold 2010, Miller 2019). However, the shape and origin of every letter are disputed. As one cannot refer to signs without their corresponding sounds, a brief overview of the major characteristics of the Gothic sound system follows.

1.5 Pronunciation

Although phonology falls outside of the present study's scope, we shall mention some pronunciation patterns that can affect morphology and should enrich my discussion.

Germanic includes a sound change that has transformed the Proto-Germanic language significantly; namely, Verner's law, the historical sound change, according to which consonants that would have been voiceless fricatives (*f*, *þ*, *s*, *h*, *hʷ*) became voiced (*β*, *ð*, *z*, *ɣ*, *ɣʷ*) when preceded by an unstressed syllable (Fulk 2018). Notwithstanding the decisive effects of Verner's law on North and West Germanic, the representative of the East Germanic branch, Gothic, has only isolated attestations of voicing occurring mostly in the ablaut system (Miller 2019: 31), as can be exemplified below:

(3) ái<u>h</u> **1ST PER PRES**   ái<u>g</u>um **1ST PER PRETERITE** (= possess)

(4) þar<u>f</u> **PRES** þaúr<u>b</u>um **PRETERITE** (= need)   (Miller 2019)

1.5.1 Thurneysen's Law

The Gothic sound system demonstrates a unique feature under a 'sound law', called Thurneysen's Law. According to Suzuki (1994), a fricative is voiced when the two previous sounds are an unstressed vowel preceded by a voiceless consonant, as illustrated in example (5). As can be deduced, the opposite happens when the first consonant is voiced. Examine example (6):

(5)   witu**b**ni ('knowledge') < *witan*   ('know')
(6)   waldu**f**ni ('power')   < *waldan*   ('to rule')   (Suzuki 1994)

It is thereby obvious that voiced and voiceless spirants in Gothic alternate between voiced and unvoiced in certain affixes.

1.5.2 The Vowel Sound System

A milestone in Gothic phonology research constitutes the study of the vowel sound system; an abyss of ambivalence and speculation surrounds the analysis of the sound system of Gothic. There is an enormous number of studies concentrated on Gothic vowel phonology, and Miller (2019) has successfully compiled an inclusive and exhaustive analysis of Gothic phonology.

An issue which has appealed to several researchers dating back to the very first studies revolving around Gothic phonology, and still appealing to contemporary researchers, involves diphthongs, such as *au, iu* and *ai* (Jones 1958, Rousseau 2012, Snædal 2013/2017). Gothic's phonological 'Breaking Rule' dictates that stressed /i/ and /u/ were lowered to *ai* [ʒ], *au* [ʮ] before *r, h, ƕ*. The main argument revolves around whether diphthongs were monophthongized in Ostrogothic before the 'Breaking Rule'. For instance, the word *Diabulus* ('devil') found in Wulfila's scripts can be considered an instance of the estimated original spelling. Consequently, the version *diabaúlus* can be considered an Ostrogothic version of the aforementioned word, borrowed and adapted from the Greek *diábolos.*

1.6 Gothic Morphology

Moving on to the morphology of the Gothic language, which is of utmost importance for my study, it is imperative to note that Indo-European morphological elements, which are not always preserved in other Germanic languages, have survived and are evident in Gothic.

A characteristic morphological feature constitutes the declension system, namely, the numbers and cases under which the nominal system is inflected to indicate their distinctive role in a sentence. Gothic has five cases, nominative, accusative, genitive, dative, and vocative; the latter can be the same as the nominative or the accusative (Wright 1954, Miller 2019). As can be seen in Table 1.1, nouns have suffixes for all cases and both singular and plural numbers.

Table 1.1 Noun: *guma* ('man')

	Cases	
	nom.	gum-**a**
Singular	*acc.*	gum-**an**
	dat.	gum-**in**
	gen.	gum-**ins**
Plural	*nom.*	gum-**ans**
	acc.	gum-**ans**
	dat.	gum-**am**
	gen.	gum-**ane**

(Miller 2019)

The three genders (masculine, feminine, neutral) are all present, and adjectives, like nouns, are inflected for the two grammatical numbers, singular and plural. The form of the nominal stem plays a decisive role, as the classification of nouns is realised based on the stems *a, ō, i, u, an, ōn, ein, r*.

Table 1.2 includes an example of a Gothic adjective in all cases, both in the singular and in the plural. As one can notice, the -*an* suffix is considered to be definite, whereas, the -*a* suffix is considered to be indefinite.

However, adjectives are also definite when combined with the definite articles *sa/þata/sō*, whereas indefinite adjectives tend to use only the combination of *a*- and *ō*-suffixes.

Table 1.2 Adjective: *blind-o/a*

Number		Case	Root	Masc.	Fem.	Neutral
Singular		nom.	blind-	-a	-o	-o
		acc.	blind-	-an	-on	-o
		dat.	blind-	-in	-ons	-ons
		gen.	blind-	-ins	-ons	-ons
Plural		nom.	blind-	-ans	-ona	-ona
		acc.	blind-	-ans	-ona	-ona
		dat.	blind-	-am	-om	-om
		gen.	blind-	-ane	-ono	-ono

(Miller 2019)

The division between strong and weak adjectives, although not as important in Gothic as in other Germanic languages, has caused controversy among researchers. The general rule of suffix differences and the existence or absence of the definite article have not satisfied several researchers, such as Ratkus (2015) who highlights adjectives such as *sama* ('same') that have only one form, or neuters in *-ata* which diverge from attributive and can function predicatively as well.

What is more, pronouns in Gothic also possess declension; what is particularly important is that along verbs, as will be discussed later, they preserve declension for the dual number, which was also present in Ancient Greek and Sanskrit (Braune 2020), as it is a characteristic of the Proto-Indo-European grammar.

Undoubtedly, many systematic motifs can be challenged by sifting through the morphology and phonology borrowed or adapted to render Christianity accessible to Wulfila's target audience (Falluomini 2015). Characteristic examples of such cases can be loan words and names, formed by the mere influence of foreign words (Snædal 2015c).

16

1.7 The Verbal System

A core issue within Germanic studies, and the central focus of my research, consists in the verbal constructions of Gothic. Verbal inflections in Gothic occur for the singular, dual[4] and plural numbers involving all three persons. In terms of tenses, Gothic displays only Present, Preterite/Past and *non-past* which seems to serve as the equivalent of future forms in the Gothic source text (Wells 2009, Kleyner 2015, Rousseau 2016). Inflections also express the optative/subjunctive and the subjunctive moods.

Sifting through the Gothic verbal typology, the nominal pattern of strong-weak forms is evident in the verbal system as well. Strong verbs in Germanic languages are verbs whose stem changes in the past as well as in the past participle. For instance, in English, *fall-fell-fallen* would be an example of a strong verb (Jasanoff 2007). In Gothic, strong verbs are classified into seven classes as can be seen in Table 1.3.

Table 1.3 The seven classes of strong verbs in Gothic

Strong verb classes		Stem vowel
Class	Subclass	General
1		ei
2	2a	iu
	2b	ū
3		i, aí (before h, ƕ, r)
4	4a	i, aí (before h, ƕ, r)
	4b	u, aú (before h, ƕ, r)

---

[4] Apart from nouns and 3rd person pronouns which have lost the dual (Miller 2019).

5		i, aí (before h, ƕ, r)
6		a
7	7a	C+a, ā, ái, au, áu, ē, or ō
	7b	C+ai, ē

<div align="right">(Miller 2019)</div>

On the contrary, the past form of weak verbs is realised by the addition of a suffix, such as the English *call-called-called*.

A characteristic example of a Gothic strong verb, *waírþan* ('get to be'), can be observed below:

(7) waírþan**PRES** – warþ**1ST/3R SING PRET** - waúrþum**1ST PLURAL PRET** -waúrþans**P(P)P**

<div align="right">(Mottausch 2013)</div>

In example (7), the preterite form indicates that Gothic retains 'breaking', as happens in other IE languages, such as Greek (*leipo* 'I leave', *leloipa* 'I have left', *elipon* 'I left'), which is proposed by extensive research (Harðarson 2017).

Researchers also agree that Gothic verbs of the 7th class preserve reduplication (Jasanoff 2007, Moon 2010). Consider the examples:

(8a) *-letan*, *laílot* ('let')   (8b) *-tekan*, *taítok* ('touch')

Namely, in order to form the reduplication, the first consonant is copied adding -*ai* (/ε/) (i.e., *laílot, taítok*)[5].

In addition, voice in Gothic embodies a more complex aspect within the verbal system; it preserves the IE mediopassive under the form of synthetic passive in non-past but takes the form of a periphrastic passive in the past tense. Consider the following example:

---

[5] For an extensive account of strong and weak verb lists, refer to Miller (2019: 179-219).

(9) saei **ga**baira**da** weihs haita**da** sunus gudis (Lk 1:35)

'that holy thing which shall *be born* of thee shall *be called* the Son of God'

(Miller 2019)

Example (9) includes two passives; *gabairada,* which has ablaut through word formation, and *haitada;* the synthetic passive forms **ga**baira**da** ('be born') and haita**da** ('be called') constitute synthetic passives. Harðarson (2017) highlights the scarcity of such constructions in other Germanic languages, which reportedly have lost the inflections.

Middle diathesis is realised through reflexive pronouns and verbs in *-nan*. In this light, *wisan,* the Gothic verb 'to be' is extremely useful, as it is not only used as a copula, but also as an auxiliary, in which case it can never be omitted. However, it is considered extremely difficult to distinguish between periphrastic passives and other periphrases, such as *werdan* ('become' + PPP) (Luraghi *et al*. 2021).

Apart from synthetic non-past passives, simple past passives are formed periphrastically with the past passive participle accompanied by the verb 'to be'. To illustrate the construction, consider the example below drawn from Miller (2019):

(10a)   unte in imma <u>gaskapana waurþun</u> alla . . .

    for in him create.PPP.NOM.PL.N *become*.3PL.PRET *all*.NOM.PL.N

    alla þairh ina . . . <u>gaskapana sind</u>

    all.NOM.PL.N *through him create*.PPP.NOM.PL.N *be*.3P   (Col 1:16A/B)

'For in him all things were/became created...all things through him are/have been created'

(10b)   sa sunus meins . . . fralusans was

    D.NOM.SG.M son my lose.PPP.NOM.SG.M be.3SG.PRET   (Lk 15:24)

    'my son was lost'

In (10a), the Greek AOR Passive *ektísthē* 'got (to be) created' is attested in the Greek source text; however, in (10b) instead of the sense of 'become', *warþ* emphasizes the state, translating the Greek perfect passive *apolōlōs ẽn*. On this account, researchers have agreed that whenever 'be' is used in the Gothic passive, the meaning enclosed is stative (Ferraresi 2005), but passives expressed by *wisan* encompass a resultative, 'get to be' state (10b).

1.8 Gothic Syntax

Gothic syntax has caused havoc among scholars, as the idiomaticity of Gothic sentence structure and typology have been called into question due to the influence inflicted upon the Gothic religious texts by the Greek source texts. By contrast, proponents of the idiomaticity of the Gothic language argue against such views, as the original Greek source text might have been lost, so there is no specific point of reference, and as both languages are Indo-European, some similarities are inevitable (Ratkus 2016, Falluomini 2018).

In terms of the pronominal features of clauses, overt subjects can be omitted in Gothic, suggesting that the latter constitutes a null-subject language, like Ancient Greek, Old English and Sanskrit. Evidence from the Gothic translations shows that Greek sentences with overt pronominal subjects can be translated by null-subject sentences. Moreover, the reverse is also possible, as Gothic can render Greek subjects overt by employing a pronominal subject (Harbert 2007, Miller 2010).

Furthermore, a vital element of syntactic analysis, the position of the verb, could not be omitted; Falluomini (2018) enriches previous claims of verb-second (V2) position of the Gothic verb (Eythórsson 1995, Buzzoni 2009) by examining the verbal position in the Bologna fragments as well. As expected, the scholars' conclusions abound, as the verb order seems to be free and maintains a verb-subject, apart from *wh*-questions, imperatives and negations.

(11) galeiks ist mann timrjandin razn

   lit. 'similar (he) is to (a) man who built (a) house'

   ὅμοιός ἐστιν ἀνθρώπῳ οἰκοδομοῦντι οἰκίαν   (Lk 6:48)

(12) aiwaggeljo þairh lukan anastodeiþ

   lit. '(the) Gospel according to Luke begins'   (Codex Argenteus, 118)

                                  (Falluomini 2018)

Example (11), drawn from the 'Bologna fragment' displays similarities concerning the verb-final position of the verb between the biblical excerpts. As can be noticed in example (12), both prove that Gothic syntactic features do not necessarily align

with the Greek syntax, and should this occur, it would probably have been acceptable for the target (Goth) reader (Falluomini 2018).

1.8.1 Transitivity

The transitivity of the Germanic verbs concerning ditransitive constructions has mainly focused on the analysis of modern languages and, especially, on their development in English (Colleman 2011, Yáñez-Bouza 2016, Zehentner 2018). However, sifting through earlier Germanic languages can offer insight not only into the evolution of transitivity but also into the reconstruction of ditransitive proto-forms, which have been rather neglected. Gothic employs a variety of case patterns (i.e., Nom-Acc-Dat, Nom-Acc-Gen,Nom-Dat-Gen,Nom-Dat-Dat, Nom-Gen-Gen) but constructions, such as the dative case for indirect objects and the accusative for direct is the most prevalent. Vázquez and Barðdal (2019) have compiled typological patterns of ditransitive verbs based on conceptual categories.

(13) **Gothic**

    duþþe Moses **atgaf izwis bismait**.

    therefore Moses gave youDAT circumcision.ACC

'*Therefore Moses gave unto you (the law of) circumcision.*'   (John 7:22)

                        (Vázquez and Barðdal 2019)

Example (13) presents a characteristic example of the prototypical gothic verb *giban* ('to give') which belongs to the semantic category of *GIVING*.

Such categories (*transferring, enabling, owing*) claim two objects and seem to have parallel equivalents in all earliest Germanic languages, such as Old English and Old-Norse Icelandic (Vázquez and Barðdal 2019: 593).

Apart from external objects, transitivity sometimes turns to the subject itself; namely *reflexivity* or *autocausative* occurs. Research has shown that Gothic has started replacing the IE mediopassive with reflexive constructions or anticausative.

	bidjam	izwis,	broþrjus . . .	du ni	sprauto	<u>wagjan</u>
(14)	ask.1PL	you.ACC.PL	brothers	to neg	quickly	shake
	izwis REFL.ACC					(2Thess 2:1)

(Miller, 2019)

Example (14) illustrates an idiomatic case in Gothic, the simple reflexes which, in this case ('<u>wagjan</u>'), is a substitute for the passive (Miller 2019, Braune 2020). Reflexes can also help detransitivisations in Gothic, as they can also function as anticausatives.

	ni	<u>blandaiþ</u>	<u>izwis</u>	miþ	imma,	ei
	NEG	mix.2PL.OPT	you.ACC.PL.REFL	with	him.DAT	that
(15)	<u>gaskamai</u>	<u>sik</u>				
	shame3SG.OPT	REFL			(2Thess 3:14)	

'do not mingle with him, that he may be ashamed'

(Miller, 2019)

The Gothic verb *blandan* ('mix') can be causative or, a simple reflexive, like *izwis*, in example (15), it can be anticausative. The other verb in (15), *skaman*, usually translates a Greek middle (e.g., aiskhúnomai '*I am ashamed*) occurring with a simple reflexive ('*shame oneself*') (Harbert 2007, Miller 2010).

1.8.2 Absolute Constructions

Gothic takes advantage of all the cases available in its grammar to form absolute constructions; namely, apart from conventional syntactic relations between words in a sentence, a relatively short phrase, be it in the form of a non-finite subordinate clause, an adjective, or a possessive pronoun, Gothic constructions in the nominative, genitive, dative and accusative stand alone and semantically affect the matrix clause (Dewey and Syed 2009).

23

The use of absolute constructions constitutes an idiomatic property of the Gothic language, evidence for which can be deduced from examples (16a) and (16b).

(16a) **Go**:

      iþ marei winda mikilamma waiandin was urraisida

      but sea wind.dat great.dat blowing.dat was raised-up

Gk:

      hē te thalassa anemou megalou pneontos diegeireto

      the and sea wind.gen great.gen blowing.gen stirred-up.3sg

     'The sea began to be stirred up because a strong wind was blowing'.

<div align="right">(John 6:18)</div>

<div align="right">(Miller 2019)</div>

In (16a) the bare dative can be interpreted by a causal or temporal reading, translating the Greek genitive absolute *pneontos.* Contrarywise, (16b) shows the use of *at* in combination with the dative in Gothic to enclose the meaning of "time when".

     Go: at andanahtja þan waurþanamma atberun du

        'as evening.DAT then become.DAT bore.3PL to'

        imma daimonarjans managans

        'him.DAT demon-possessed crowd'

(16b)   **Gk:** opsias de genomenēs prosēnenkon autō

        'evening.GEN but becoming.GEN brought.3PL him.DAT'

        daimonizomenous pollous

        'demon-possessed many'

'When evening came, they brought to Him many who were demon-possessed.'

<div align="right">(Matthew 8:16)</div>

<div align="right">(Miller 2019)</div>

On this account, data indicate that genitive absolutes, the only category of absolute constructions present in Greek, can be translated with another type, or non-absolute, constructions that express the desired semantic relations of the expression examined.

As mentioned, the mediopassive had already been lost in North and West Germanic languages; such constructions were fragmentarily found in Gothic, but only confined to the present tense. The loss of IE synthetic mediopassive was caused by the rise and expansion of the reflexive construction, and not the other way around (Cennamo 2010).

Gothic morpho-syntax has proved to enclose invaluable input for the Germanic branch. It can be admitted that idiomatic features are evident to those studying the Gothic language in depth. On this account, it would be necessary to discuss aspects of Gothic that are similar to or even imitate the Greek biblical source text.

1.9 Concluding Remarks

From what has been discussed so far, Gothic seems to encompass information in relation to the parallel grammar systems that peacefully co-existed and interacted at the time of the Biblical Translations. Investigating the relation between the source and the target texts, as well as the target text (i.e., Gothic) and another Germanic language from a different branch (i.e., English), can reveal patterns in their grammatical systems. This way, as I will focus on interlingual translations (i.e., Gothic and Greek) and intralingual translations (i.e., older and later English translations), my study can contribute to the research field of written contact adopting a contrastive approach. I will also be able to integrate my results into the theoretical framework of *Grammatical Multiglossia* (Lavidas 2022), suggesting a one-synchronic grammatical co-existence influencing present grammatical systems.

What is more, the focus is to be placed on verbal constructions in an attempt to highlight basic typological differences between the diachronic (re)translations. The results will be examined through the use of corpora and computational software to contribute to the demand for more coherent and statistically-based analysis in Gothic Linguistics instead of mere comparisons based on intuition (Ratkus 2020). What is more, the grammatical investigation of language contact and the extent of influence potentially leading to language change via parallel corpora can offer insight into the connection between grammatical characteristics and language acquisition. The latter is extremely important, as an increasing number of proponents of language change due to bilingualism have suggested imperfect learning or contact-induced interference as the main causal factors.

To this end, in **Chapter 1** of this paper, the history, the basic linguistic features of the Gothic language and its relation to biblical translations are presented. In addition, the theoretical framework I will employ, as well as previous studies on the particular subject have been outlined. In **Chapter 2**, the methodology and the materials that constitute the foundations of my study are introduced and extensively explained. **Chapter 3** presents the results, highlighting statistical findings in relation to typological verbal patterns that are considered crucial for the contrastive comparison of the diachronic (re)translations. In **Chapter 4** key

findings are summarised and the results are explained in relation to other studies in the particular research field, highlighting their importance. The final section, **Chapter 5** summarises the goals of the present study and answers the questions initially posed. Future studies on the matter will find this chapter particularly illuminating, as I present implications for further research, acknowledging the limitations of the present study that can usher future investigation.

Chapter 2

The Materials and Methodology of the Present Study

2.1 Materials

The focus of the present study is, as discussed, the diachrony of verbal constructions in the New Testament translations from Greek into Gothic and other Germanic languages.

Considering the extent and purpose of my research, I shall focus on the *Pauline Epistles to the Corinthians II:12*. The plain text of the Gothic corpus was retrieved online from the Wulfila Project (http://www.wulfila.be/gothic/). The selected corpus I compiled for the other Indo-European languages (Table 2.1) was extracted from the PROIEL library. It is worth recalling that the preliminary questions posed focus on (i) the typological characteristics of verbal constructions in earlier and later translations, further compared to the Greek source text, and (ii) the integration of computational tools to examine whether written language contact can be diachronically examined in parallel grammatical systems.

Table 2.1 Selected texts for the New Testament Corpus

Language	Text
Gothic	*Corinthians II: 12*
Standard English Translation	
14th cent Wycliffe translation	
16th cent Tyndale translation	
Byzantine Greek Version	

2.2 Methodology

In light of the material selected, I performed two analyses. The first one was carried out using the *LightSide* software to achieve Document Classification through a

machine-learning approach. Namely, the dataset was divided into binary classes of relevant and irrelevant documents (Taavitsainen and Schneider 2018: 195). Such a corpus-driven approach (namely, the hypothesis is 'driven' or guided by the actual data), pertaining to computational methodology, allows cross-validation of the data, integrates statistical tests, and allows the researcher to notice patterns that were not noticed in previous relevant studies.

My initial attempt started by importing the data in *LightSide* and selecting the Features to be extracted (Table 2.2). The selection served the division of my data into Part-of-Speech constructions. Through the 'Explore Results' interface, I limited the target features to verbal constructions which fall into my scope of interest. Subsequently, I trained and built my models, selecting the 'Logistic Regression' algorithm, which offered insight into the weight of the verbal constructions of my models. Through this process, the software learnt to replicate the human labels assigned to the typology of the verbal constructions extracting the most characteristic combinations.

Table 2.2 Extracted Features via *Lightside*

Lightside	'Extract Features' Algorithms
	Bigrams
	POS Bigrams
	Parser
	N-Grams(3 left &right)

As can be assumed, my aim was to compare the verbal constructions between the Gothic and the older vs later New Testament retranslations of the excerpts. This was achieved by comparing the value of the 'Feature Weight' which allowed me to distinguish the most common and typologically identical or similar constructions in the Germanic Languages dataset.

The second case study included the constituents forming the verbal constructions in the Gothic and English Corpora, this time compared to the correspondent verbal constructions and the Greek corpus.

In order to focus the analysis on particular constructions, I examined the corpora through a phrase-matching methodology within a purely corpus-driven approach.

I namely used the same dataset imported into *LightSide* in another corpus-building software for textual analysis, *AntConc*, after annotating the corpus using the TagAnt Part-of-Speech tagger (free software available on the Anthony Lawrence [site](#)). It is noteworthy that throughout my analysis I employ tags adapted from the Stanford Part-of-Speech tags (https://nlp.stanford.edu/software/tagger.shtml#Download), based on which the *LightSide* software functions (Table 2.3).

What is more, I performed a 'Concordance' search for the most typical verbal constructions previously extracted by *LightSide*. Namely, the query search was realised based on the combination of syntax (e.g., VB_NP, VP_ADJ).

The results of this analysis were examined in terms of typological deviations between the Gothic and English constructions, as well as between Gothic, English, and Greek. My methodology aligns with previous corpus-driven studies using machine-learning software (Lavidas 2022) between translated and non-translated texts within a diachronic perspective.

Table 2.3 List of Part-of-Speech tags used in the corpus-analysis

---

ADJ	Adjective
NP	Noun Phrase
NN	Noun Singular or Mass
NNS	Noun Plural
PR	Preposition
VB	Verb Base form
VBD	Verb Past Tense
VBN	Verb Gerund or Participle

Chapter 3
The Results of the Present Study

3.1 Results

The initial analysis of the first case study offers insight into the most common verbal constructions extracted from *LightSide*. As can be seen in Table 3.1, verbal constructions including a noun phrase (VP_NP) are the most common verbal patterns both in Gothic and in older and later English translations of the *Epistles to Corinthians II:12*. Such noun phrases can include proper nouns, common nouns, and pronouns as well. Such a finding can be considered rather predictable; thus, it shall not occupy our analysis.

In addition, verbs accompanied by gerunds or present participles (VP_VBG), as well as by past participles (VP_VBN) come second in the most typical verbal constructions, which can be justified considering the tendency of Germanic for periphrastic constructions. This aligns with the third-in-line typical construction, verbs accompanied by prepositions (VP_PRP / PRP_VP).
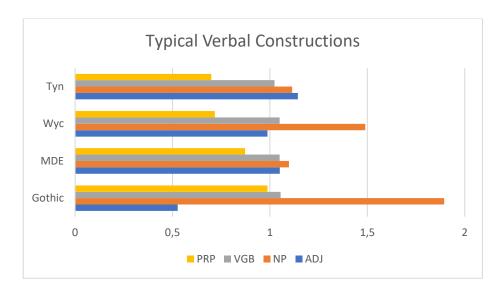
Table 3.1 The most common verbal constructions in Gothic and older/later English New Testament translations

CONSTRUCTIONS	TEXT	Feature weight	
VP: PRP_VP	*Gothic*	0.52677	.
	Present Day English	1.05064	
	14th cent Wycliffe translation	0.98726	
	16th cent Tyndale translation	1.14368	
VP: VP_(N)NP	*Gothic*	1.89426	
	Present Day English	2.08126	
	14th cent Wycliffe translation	1.09745	

	16th cent Tyndale translation	1.48874
	Gothic	1.05484
VP: VB_VBG/N	*Present Day English*	1.13521
	14th cent Wycliffe translation	1.04987
	16th cent Tyndale translation	1.05012
VP: ADJ_VP	*Gothic*	0.98752
	Present Day English	0.71578
	14th cent Wycliffe translation	0.87215
	16th cent Tyndale translation	0.71689

Figure 3.1 sheds light on the distribution of the most typical verbal constructions within the texts. Namely, in all English texts, there seems to be a unanimous inclination to use verbs with nouns, but the East Germanic Gothic seems to outnumber them and displays the highest rates of verbal matrices constructed by noun phrases. Moreover, the frequency of verbal constructions with adjectives seems to be decreasing as the New Testament is being diachronically retranslated in English, while the combination with prepositions seems rather steady.
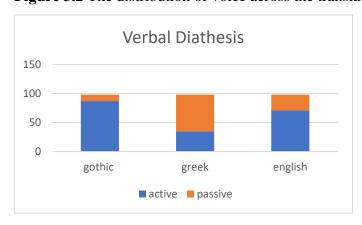
Figure 3.1 Distributions of verbal constructions within the diachronic translations of the Bible

The similarities and subtle differences between the Gothic translation and the older vs later English retranslations cause interest regarding their context of occurrence, and more specifically, the diathesis/voice they express in the different texts.

In this light, the most typical verbal constructions in these Germanic languages were further explored in terms of voice. For this purpose, the same dataset was compared to the equivalent Greek verses in terms of voice. Namely, the labels highlighted by the results in *LightSide* were investigated in terms of verbs in the active or non-active active. See Figure 3.2:

Figure 3.2 The distribution of voice across the translated and non-translated texts

3.2 The Voice of the Constructions

Most of the verbal constructions in Greek, as can be seen from Figure 3.2, tended to employ verbs in the passive voice, scoring more than half of their constructions in passive, whereas English retranslations show fewer passives. Such a finding raises questions regarding the role of meaning and its influence on morphosyntax considering that Gothic appears to maintain the equivalent verbal constructions in active forms. However, in the passage examined in the present study, there was no evidence of verbs in mediopassive. Mediopassive is, namely, the diathesis whereby middle semantics are expressed via synthetic passives (e.g., *gebairada*), reflexives and the *-nan* verbal class. Within the selected excerpts, the constructions examined included solely synthetic passives, which did not display middle meaning, thus, are merely classified as synthetic passives (Katz 2021).

As can be deduced from the graphs examined so far, there are more than half of the Greek verbal constructions in a passive form that do not correspond to identical constructions either in Gothic or in English. Figure 3.3 displays the verbal constructions wherein differences between the Greek source text, the Gothic direct translation and the Modern English retranslations are to be observed.

Figure 3.3 Typological deviations in Greek-Gothic-English non-matching phrases

34

3.3 Typological Deviations in the Non-matching Constructions

To begin with something I consider fairly expected, the modal constructions noticed in Greek are maintained and even proliferated in English, although almost totally absent from the Gothic text, except *magan** 'be able', *skulan** 'be obliged', *þaurban** 'need'.

Gothic appears to employ several prepositional phrases, even when the source phrases in Greek do not opt for such constructions, while those in English seem to follow. What is more, I found that more than half of the prepositional phrases in Gothic corresponded to Greek, and to a lesser extent, English passives. On this account, several passive verbs were translated into Gothic by means of active verbs accompanied by prepositions. Let us examine the table with relevant examples below:

Table 3.2 Examples of typological deviations in verbal constructions

Excerpt	Gothic	Greek BZN text	English
CorII 12:7	(1) ufarhugjau$_{ACTIVE}$	ὑπεραίρωμαι$_{PASSIVE}$	should be exalted$_{PASS.MOD}$
CorII 12:5	(2) faur þana$_{PP}$ hvopa$_{ACTIVE}$	ὑπὲρ τοῦ τοιούτου καυχήσομαι$_{PASS}$	Of such a one **will**$_{MOD}$ I glory
CorII 12:15	(3) fraqimada$_{ACT}$ faur$_{PP}$	ἐκδαπανηθήσομαι$_{PASS}$	**be** spent$_{PASS}$ for you

Example (1) constitutes a characteristic example of the passive verbs in Greek translated by an active verb in Gothic, adapting meaning. Notwithstanding the English translation seems to return to the passive form, incorporating a modal (i.e., 'should') to achieve semantic appropriacy. By contrast, example (2) is indicative of a passive Greek construction corresponding to an active construction in Gothic, whereby the verb is accompanied by a preposition. Likewise, the English verb in (2) is expressed via an active verb and preposition. This agreement between English and Gothic is not preserved in example (3), wherein the deviation between the Gothic and Greek verbal constructions align with that of example (2). However, they appear to be substituted by a passive infinitival construction as a result of the translation in English. The meaning of such syntactic correlations and deviations shall be discussed in the next chapter.

Chapter 4
Discussion

4.1 Summary of the Present Study

It should be reiterated that the present study was built upon the hypothesis that typological evidence derived from religious translations can provide evidence for written contact, that is, the verbal syntax I focus on could illuminate an aspect of the influence Greek had on Gothic, and whether the latter bears typological similarities with other Germanic languages.

In this light, my research questions can be summarised as follows:

   i.   whether and to what extent does written contact between biblical translations of Gothic and Greek provide evidence of linguistic transfer?

   ii. are verbal constructions in the Gothic biblical translations closer to the Greek or the Germanic typology (i.e., examined through diachronic English retranslations)?

The results indicate that such an analysis can successfully highlight typological patterns within the verbal syntax of religious texts in written contact as evidence for typological similarities or differences between Gothic juxtaposed with Greek and English, as my hypothesis proposed.

After examining parallel constructions in digitalised annotated corpora, the data suggest a correlation between English and Gothic in terms of their cluster preferences in their verbal constructions, that is, the syntax of the verbal phrases. Unsurprisingly, the high preference of Greek, Gothic and English verbs for the selection of noun phrases (i.e., proper and mass nouns), adjectives and prepositions can be justified by the genre of the texts; namely, it is expected of religious texts to refer to holy names, directly address the hearer, or exemplify using particular cases (Sitaridou 2014).

Furthermore, the type of constructions that occur in the passive voice, present an increased use of modality in Greek and English, compared to extensive use of

36

prepositional phrases in Gothic; the patterns arising are understandably more valuable than the constructions examined in the active voice, which they also outnumber. That being said, Greek might display an inclination to employ passive structures due to the semantic fitness of the verbs employed. By contrast, on close analysis, such passive structures are translated into Gothic through a pattern of prepositional phrases accompanying the verbs, probably to adapt the semantic meaning through the semantic nuances of the prepositions, whereas English tends to use more modal verbs in such cases.

4.2 Significance for Diachronic Research

These results can be accounted for based on the theoretical framework of *Grammatical Multiglossia*, as proposed by Lavidas (2022). Namely, during a period when parallel grammatical systems existed, a necessary co-existence that occurred unavoidably resulted in contact or even transfer between the languages. Thus, in alignment with research on written contact (McLaughlin 2011, Luraghi 2013, Lavidas 2022) the grammar of a language being translated to another language can diachronically influence later non-translated texts. Therefore, such linguistic adaptations can cause a diachronic language change which can only be visible by examining texts in all the languages involved in different periods.

The contribution of my findings to the particular theoretical framework lies in the fact that diachronic evidence for language change is not necessarily reflected directly in the retranslations but such a complex relationship has a visible residing footprint, the patterns of which can be valuable for diachronic research.

4.2.1 Competing Grammars and Diachronic Bilingualism

The analysis of the co-existence of parallel grammatical systems can add to the research of contact and change. Grammatical change is explained by many scholars as a failure of the transmission of grammar, which depends on the type of evidence available to the learners or by that specific time the learner acquires the language (see Lavidas 2022, among others).

According to the basis of the framework into which I integrated the present study, *syntactic diglossia* (Kroch 1989/2001), the existence of a grammatical system co-existing at the same period with other grammatical systems is proposed; as is suggested, speakers can be competent in more than one grammatical systems. By addressing such grammatical systems as different, the emphasis is not to be placed on crucial distinctions but rather on differences in at least one parameter. In this light, the case of Gothic which is the core of the present study can be placed within the described situation, especially considering that Gothic tribes moved to the Balkan Peninsula (see Chapter 1) and co-existed with speakers of other languages, exposing their language to a state of contact. Such a state can be considered a *Sprachbund* situation, that is, a state of co-existence of languages sharing a set of features in a particular region; such features distinguish them from other languages pertaining to the same language family. In this case, the elements to be transferred depend on the typological distance of the languages.

Under the spectrum of generative grammar, individuals can internalise more than one representation, which applies to the context of grammatical co-existence in contact settings as well. Moreover, over the last decade, similarities between the competing grammars in first (L1) and second (L2) language acquisition and contact settings have been examined in parallel (Hickey 2010, Štrmelj 2020). More specifically, within the acquisition process, one confronts conflicting data and ends up conducting multiple mental analyses to figure out the input they receive (Liceras 2014).

Internalised diglossia can affect the linguistic systems in the diachrony of languages in a similar way to language acquisition processes. Thus, a parallel can be drawn between contact-induced language change and bilingualism. Thomason (2003) presents ways of linguistic transfer in L1 and L2 language acquisition.

Code-switching is one of the most prominent contexts of language contact, which can cause transfer and, consequently, grammatical change. In situations whereby one language or variety is considered to be more prestigious, code-switching often results in borrowing. In addition, imperfect learning and L1 interference or negotiation, that is, L2 strategies used to approximate what the patterns in the target language are can also result in transfer. As can be deduced so far, a clear parallel between diachronic translations, language contact and various forms of bilingualism is implicated.

By examining the parallel corpora of the biblical excerpts in the present study, my findings can contribute to the field of *diglossia* research, considering the geographical placement and the socio-political context at the time of the Gothic translation, that is, the period of the Christianisation of the Gothic tribes employing the biblical texts as the means to bring the Goths closer to the new religion. It can be assumed that when languages become institutionalised, they subdue 'a global institutionalisation', that is, some natural grammatical changes 'pause', and particular features of the language are preserved, usually accompanied by the introduction of artificial structures to facilitate a standardised, unified spread. This semi-natural change (Thomason 2003, Lavidas 2022) can apply to contexts of prestigious languages (Snow 2013), such as the genre of religious texts, which are often linked to education and intellectuality. Therefore, in order for speakers of other languages to grant access to such texts, translation strategies, such as code-switching, are to be employed. The case of Gothic translations could apply to this context justifying interference from the source language. Transfer from the source language, however, is not necessarily directly manifested in the translated text, as deviations from the source language's diachronic retranslations might be attributed to standardisation, which is also possible to occur in the retranslations of the target language (i.e., a possible explanation accounting for the relationship between Gothic and English).

In the present study, Gothic verbal constructions differed from the Greek source text in the expression of voice/diathesis displaying idiomaticity and, to a certain extent, proximity to the English typological preferences within verbal constructions. The bilingual state during the time of the Gothic translation insinuates that grammatical systems existing in parallel might have formed an

interlanguage grammar. According to Lavidas (2022), the interlanguage formed in retranslations can reflect diachronic changes attested in non-translated texts. The latter highlights the importance of a contrastive comparison of the retranslations of biblical texts to other Germanic languages, similar to the methodology employed in the present study. The potential grammatical changes observed can be viewed within the *Grammatical Multiglossia Theory* as a semi-natural change due to contact or transfer from another co-existent grammatical system (i.e., that of the source text).

Although in the past it would have been considered unorthodox to combine diachrony with contemporary bilingualism (Meisel 2011), bilingualism can reveal grammatical relationships. In addition, diachronic studies employing computational methodologies to ensure the coherence of the data can shed light on patterns and processes that cause certain developments resulting in a difficult but promising interdisciplinary approach. When a grammatical change occurs, reanalysis of the syntactic patterns leading to the reorganisation of the mental grammar is evoked. The mechanisms of linguistic acquisition in parallel with language contact can involve a cross-generation reanalysis of grammar. Therefore, studies on the effects of diachronic bilingualism can lead to a new analysis of contact-induced change. As can be deduced, all information on contact scenarios is crucial, as it can shed light on principles that operate within the context of contact and change. Other significant diachronic parameters are the relationship between internal development and contact-induced language change.

Such a cognitive or psycholinguistic turn can prove fruitful to other instances of contact as well, especially in non-bilingual settings, such as pidgins and creoles, which can be inspirational for another avenue of future research. Aitchison (2003) has strongly supported an interdisciplinary perspective to reveal how the properties of the human mind occur and which properties in particular lead to language change. Emphasis is to be placed on the importance of quantified typological data on the preferred constructions (Aitchison 2003: 743), as it is a crucial step towards hypothesising over the production and parsing principle as a linguistic property. On this basis, it was one of the aims of the present study to shed light on an approach and methodology to typologically classify the verbal constructions in the corpora under examination opening avenues for further research.

4.2.2 Implications for the Proto-Germanic Typology

It is understandable, from my discussion so far, that a particular preference for certain constructions can showcase both the typological possibilities of every variety, but also the constructions susceptible to transfer. The evidence available to us through a contrastive analysis has shown an inclination of Gothic to preserve active constructions and, more importantly, to include several periphrases. The latter, as previously shown, diverged from the other Germanic variants examined; older and later English translations seem willing to integrate passive constructions employing a *BE + Past Participle* matrix. Greek, on the other hand, forms a great number of passive constructions, virtually solely in a synthetic form, which can be illustrated if we consider the examples (*ὑπεραίρωμαι*, *καυχήσομαι*, *ἐκδαπανηθήσομαι*) presented in Chapter 3.

Methodological and practical constraints, such as the limited set of data and the limited extent and purposes of the present study do not permit great typological generalisation. It is, however, imperative to note that given an extensive investigation of a larger corpus, the inclination to maintain periphrastic constructions in the Germanic languages can indicate proximity to the Proto-Germanic. As Fulk (2018) points out, Germanic forms various periphrases that allow multiple semantic nuances through the combination of words. Considering that the surviving East Germanic language seems to preserve periphrases resisting structural transfer from the Greek source test, while such periphrastic constructions appear to be declining in later translations of English (i.e., the older and later retranslations examined), the findings raise questions of whether such speculation can form a pattern offering input for the diachrony of Proto-Germanic. Of course, data is limited and native speakers of Gothic are non-existent, thus, it is virtually impossible to chart the diachronic development of the Gothic language itself; such constraints may limit attempts to reconstruct proto-forms.

Nevertheless, bilingual diachronic corpora seem promising in offering input regarding the possibilities of the Germanic typology adding to the historical linguistics research.

4.3 Limitations

Notwithstanding valuable suggestions for the methodology to be followed in future research, as well as important typological considerations to be taken into account, it is pivotal to note some limitations. Firstly, although the results seem promising, pointing to the right research directions, I should raise awareness of the limited generalisability of the findings. Corpus-based studies that include a large set of data can lead to more valid and generally applicable results (Schneider and Lauber 2019). Furthermore, controversial views on diachronic syntax in the case of translations seem to suggest that syntactic constructions are mere glosses, borrowed from the source text to adopt meaning (Kranisch *et al.* 2011), whereas other researchers support that syntactic transfer is possible only when the target language allows such constructions due to typological proximity (Fischer 2013).

All things considered, syntactical patterns through a diachronic perspective enrich significantly the field, as major patterns and meaning-making constructions can be highlighted. Nevertheless, respecting the extent and purpose of the present study, emphasis is placed on the reliability of the data which can be enhanced by a larger intralingual corpus analysed, taking into account that the development of grammar is better examined through diachronic retranslations in the languages under examination (Fischer *et al.* 2017). Thus, intralingual retranslations of biblical texts, both in English and Greek in comparison to the surviving Gothic text, are suggested for further research.

Another limitation to consider is the fact that the earliest English translations of the New Testament withheld a Latin translation (the 'Vulgate') as their source text. Therefore, this 'second-order translation' (my term), that is, an indirect translation, indicates that the source text of earlier English translations is itself a product of translation. A plausible interpretation is that the transition from Old to Middle English encompasses contact between English and Latin; there is no doubt that Graeco-Roman bilingualism is considered to have transferred elements to the English language, especially considering that it was a high-variety, associated with education and prestige (Snaedal 2015b). Although loan translations and borrowing at the lexical level are the most prominent features of interference, researchers have mentioned structural transfers as well (Biville 2003).

Chapter 5

5. Conclusion

In this study, I attempted to compare the syntax of verbal constructions in the Gothic translation of the Greek biblical text *Corinthians II:12*. I also investigated the relation and differences between the aforementioned text in Gothic by comparing it to another Germanic language, English through investigation of older and earlier retranslations. The study aimed to analyse a parallel corpus of translations using corpus and computational tools. A basic machine learning method using the *LightSide* software allowed me to integrate the computational methodology into my contrastive analysis of texts in written contact within a preliminary case study, including the most frequently occurring verbal constructions in the parallel corpora. The results indicated an attempt to fit the meaning of the Greek source text into the Gothic translations. The texts in contact did not provide evidence indicating direct transfer. However, they can be used as 'reflections' of a complex relationship between the texts, in alignment with previous research (Lavidas 2022).

A second case study used the corpus-building software for deep textual analysis, *AntConc*, illuminated the relationship between the Gothic constructions that diverged from the Greek equivalent phrases with equivalent verbal constructions in the English diachronic translations. Although typological diachronic patterns cannot be generalised, it is imperative to note that the contrastive diachrony of such constructions can provide input to further analyses of written contact; to better understand the implications of the results, future studies could take into consideration a more extensive corpus and include linguistic parameters I felt inclined to omit, such as the source translations of the English texts themselves and subsequent statistical tests among them that can reveal whether their relationship was significant.

In sum, based on my quantitative analysis, it can be concluded that the results are indicative of basic typological patterns which are preferred by the verbs examined

in the corpora. Namely, Gothic verbal constructions appeared to display differences in terms of verbal voice/diathesis; several verbs in Greek were in a passive form but Gothic preserved the Greek semantic nuances employing periphrases by means of verbs accompanied by prepositions, whereas the correspondent verbal constructions in the English retranslations integrated more passive verbal constructions, sometimes including modality (see Chapter 4).

Undeniably, an account of diachronic grammar based on written contact is extremely difficult, especially concerning the syntactic transfer. It is claimed, though, that input contributing to diachronic grammars can substantiate evidence on pattern transfer through retranslations, as every time a new system is adapted to another language, a sort of 'learning process' is conducted; the medium, or translator, being a bilingual or proficient speaker is likely to employ strategies related to language acquisition, such as borrowing, code-switching, glosses, and so on. The difficulty of adding a diachronic perspective to the investigation of such bilingual data increases, especially when one of the languages involved is no longer in use and has limited written attestations.

However, retranslations open avenues for future research, as the parallel grammars encountered are capable of revealing patterns of the routes morpho-syntactic changes followed. It has been intensely highlighted throughout my study that proponents of the contrastive approach have attempted to build theories of such 'competing grammars' (Kroch 2001) justifying their importance. Likewise, an updated theoretical framework including the importance of (re)translations and the relationships between their parallel grammars has been introduced by Lavidas (2022). A foundational threshold of the present study was the attempt to integrate the findings of my research into this theory, investigating parallel syntactic constructions in the corpora I compiled. The present study fulfilled this goal, as the comparison between Greek and Gothic, and Gothic with English retranslations provided a comparative basis in order to reveal the diachrony of verbal constructions in terms of their syntax, and the syntactical patterns adopted in different verbal diathesis. The limited extent of the present study offers insight into a theoretical framework researchers of diachronic syntax can focus on.

Furthermore, I have provided extended explanations on the history of the Gothic morpho-syntax and its relation to other Germanic languages, which can implicate research interest in the contribution of the computationally extracted syntactic patterns for the Proto-Germanic reconstruction.

References

Aitchison, J. 2003. Psycholinguistic Perspectives on Language Change. In *The Handbook of Historical Linguistics*, Brian D. Joseph and Richard D. Janda (eds.), 736–743. Oxford: Blackwell.

Andrason, A. 2010. Resultative Predicative Adjunct Constructions in the Gothic Bible. *Interlingüística* (Vol 2), 1-12.

Anthony, L. 2022. AntConc (Version 4.2.0) [Computer Software]. Tokyo, Japan: Waseda University. Available at: https://www.laurenceanthony.net/software

Biville, F. 2003. The Graeco-Romans and Graeco-Latin: A Terminological Framework for Cases of Bilingualism. In J. N. Adams, Mark Janse, and Simon Swain Print *Bilingualism in Ancient Society: Language Contact and the Written Text*. Oxford: Oxford University Press.

Bollók, A. 2016. A Fifth-Century Scriptural Amulet from Hács-Béndekpuszta in its Mediterranean Context. In Adam Bollók, Gergely Csiky and Tivadar Vida (eds.), *Between Byzantium and the Steppe: Archaeological and Historical Studies in Honour of Csanád Bálint on the Occasion of His 70th Birthday,* Hungary: Institute of Archaeology, Research Centre for the Humanities.

Braune, W. 2020. *A Gothic Grammar*. Germany: Outlook Verlag GmbH.

Buzzoni, M. 2009. Ibai mag blinds blindana tiuhan? (Luke 6:39): Pragmatic functions and syntactic strategies in the Gothic left sentence periphery. *Filologia Germanica / Germanic Philology,* 1: 29–62.

Casaretto, A. 2010. Evidence for Language Contact in Gothic. *NOWELE* (Vol 58-59)*,* 217–37. https://doi.org/10.1075/nowele.58-59.05cas.

Cennamo, M. 2010. The Rise and Fall of Anticausative Constructions in Indo- European: The Context of Latin and Germanic. In Leonid Kulikov and Nikolaos Lavidas (eds.), *Typology of Labile.*

Colleman, T. 2011. Ditransitive Verbs and the Ditransitive Construction: A Diachronic Perspective. *Zeitschrift für Anglistik und Amerikanistik* (Vol 59), 387– 410.

Costello, J. 1973. The Placement of Crimean Gothic by means of Abridged Test Lists in Glottochronology. *JIES* (Vol 4), 479–506.

Crellin, R. 2013. The Greek Perfect Active System: 200 BC – AD 150. *Tyndale Bulletin* (Vol 64), 1: 157-160.

Darchia, I. 2012. Hellenistic Koine and Modern Global Languages. *Phasis,* 15-16*.*

Dewey, T. K. and Syed, Y. 2009. Case Variation in Gothic Absolute Constructions. In Shobhana Chelliah and Jóhanna Barðdal. (eds.), *The Role of Semantic, Pragmatic, and Discourse Factors in the Development of Case.* Amsterdam/Philadelphia: John Benjamins Publishing Company.

Drinka, B. 2011. The sacral Stamp of Greek: Periphrastic Constructions in New Testament Translations of Latin, Gothic, and Old Church Slavonic. In E. Welo (ed.), *Indo-European Syntax and Pragmatics: Contrastive Approaches*, *Oslo Studies in Language* (Vol 3), 3: 41-73. https://doi.org/10.5617/osla.38

Eythórsson, T. 1995. *Verbal Syntax in the Early Germanic languages*. Cornell University.

Falluomini, C. 2006. Kodikologische Bemerkungen über die Handschrien der Goten. *Scriptorium* 60: 3–37.

Falluomini, C. 2010. Zur Schri der Gotica Vindobonensia. *ZfdA,* 139: 26–35.

Falluomini, C. 2014. Zum gotischen Fragment aus Bologna. *ZfdA,* 143: 281–305.

Falluomini, C. 2015. *The Gothic Version of the Gospels and Pauline Epistles: Cultural Background, Transmission and Character*. Berlin: De Gruyter.

Falluomini, C. 2018. The Position of the Verb in Gothic: The Contribution of the Bologna Fragment. *NOWELE* (Vol 71), 2: 161–75.

Falluomini, C. 2020. Traces of Wulfila's Bible Translation in Visigothic Gaul. *Amsterdamer Beiträge zur älteren Germanistik* (Vol 80), 5-24.

Ferraresi, G. 2005. *Word Order and Phrase Structure in Gothic*. Leuven: Peeters.

Finazzi, R. B. and Tornaghi, P. 2014. Gothica Bononiensia: A New Document Under Linguistic and Philological Analysis. *Interdisciplinary Journal of Germanic Linguistic and Semiotic Analysis*, *Spring* (Vol 19), 1-56.

Fischer, O. 2013. The Role of Contact in English Syntactic Change in the Old and Middle English Periods. In: Hundt, Marianne and Daniel Schreier (eds.), *English as a Contact Language*, 18–40. Cambridge: Cambridge University Press.

Fischer, Ol., de Smet H. and van der Wurff W. 2017. *A Brief History of English Syntax.* Cambridge: Cambridge University Press.

Fulk, R. D. 2018. *A Comparative Grammar of the Early Germanic Languages.* Amsterdam: Benjamins.

Ganina, N. A. 2007. Alcuin's Manuscript: Toward an Etymological and Historical-Cultural Treatment. *Voprosy jazykoznanija* (Vol 6), 60–72.

Ganina, N. A. 2011. Krymsko-gotskij jazyk. [Crimean Gothic Language]. *Aletejja/Aletheia.*

Goetting, L. 2007. Greek Textual Influence on Gothic Complex Verbs with Pleonastic Prepositions. *Journal of Germanic Linguistics* (Vol 19) 4, 309 – 347. 10.1017/S1470542707000141

Harbert, W. 2007. *The Germanic Languages* (Cambridge Language Surveys). Cambridge: Cambridge University Press.

Harðarson, J. A. 2017. The morphology of Germanic. *Handbook of comparative and historical Indo-European linguistics* (Vol 2), 913-95.

Haug D., and Jøhndal, M. 2008. Creating a Parallel Treebank of the Old Indo-European Bible Translations. In C. Sporleder and K. Ribarov (eds.), *Proceedings of the Second Workshop on Language Technology for Cultural Heritage Data,* 27-34. PROIEL XML: https://github.com/proiel/proiel-treebank/

Heather, P. 2010. *Empires and Barbarians: The Fall of Rome and the Birth of Europe.* Oxford: Oxford University Press.

Hickey, R. 2010. Contact and Language Shift. In: Hickey, Raymond (ed.), *Handbook of Language Contact*, 151–169. Malden, MA: Blackwell.

Jasanoff, J. H. 2007. From Reduplication to Ablaut: The Class VII Strong Verbs of Northwest Germanic. *HS/HL* (Vol 120), 241–84.

Jones, H. 2009. *Aktionsart in the Old High German Passive*. Hamburg: Buske Verlag.

Jones, O. 1958. Gothic *iu. Language* (Vol 34), 3.

Katz, R. M. 2021. *The Gothic Resultative: Non-agentive Verbs and Perfect Expression in Early Germanic.* Leiden: Brill.

Kleyner, S. D. 2015. The Gothic Future: A Tense that doesn't Exist. *Indoevropejskoje Jazykoznanije i klassičeskaja lologija* (Vol 19), 383–400.

Kleyner, S. D. 2019. Changed In Translation: Greek Actives Become Gothic Passives. *Transactions of the Philological Society* (Vol 117) 1:112-131.

Kranich, S., Viktor B. and Steffen H. 2011. A Tentative Typology of Translation-induced Language Change. In: Kranich, Svenja, Viktor Becher and Steffen Höder (eds.), *Multilingual Discourse Production:Diachronic and Synchronic Perspectives*, 9– 44. Amsterdam: John Benjamins.

Kristmannsson, G. 2019. Germanic Tradition. In Gambier and Stecconi (eds.), *A World Atlas of Translation*. Amsterdam/Philadelphia: John Benjamins Publishing Company. https://doi.org/10.1075/btl.145.17kri

Kroch, A. 1989. Reflexes of Grammar in Patterns of Language Change. *Language Variation and Change* (Vol 1), 3: 199–244.

Kroch, A. 2001. Syntactic Change. In: Baltin, Mark and Chris Collins (eds.), The Handbook of Contemporary Syntactic Theory, 699–729. Oxford: Blackwell.

Kulikowski, M. 2011. Peter Heather: Empires and Barbarians. *Journal of Interdisciplinary History* (Vol 42), 2: 277–279. MIT Press.

Lavidas, N. 2022. *The Diachrony of Written Language Contact. A Contrastive Approach*. Leiden/Boston: Brill.

Lazarova, S. 2011. The Gothic Alphabet of Bishop Wulfila and the Cyrillic Alphabet Culture. In A.Kaliff and L.Munkhammar (eds.), *WULFILA 311st International Symposium*. Sweden: Uppsala Universitet, 137-143.

Liceras, J. M. 2014. The Multiple Grammars Theory and the Nature of L2 Grammars. *Second Language Research* (Vol 30), 1: 47–54.

Luraghi, S. 2013. Contact through Translation. In: Giannakis, Georgios K. (ed.), *Encyclopedia of Ancient Greek Language and Linguistics*. Online at: http://dx.doi.org/ 10.1163/2214-448X_eagll_COM_00000079. First published online: 2013.

Luraghi, S., Inglese, G., Kölligan, D. 2021. The passive Voice in Ancient Indo-European languages: Inflection, Derivation, Periphrastic Verb Forms. *Folia Linguistica,* (Vol 55), 339-391.

Mayfield E., Adamson D., Rosé P.C. 2014. *LightSide Researcher's Workbench User Manual*. Available online: https://ankara.lti.cs.cmu.edu/side/LightSide_Researchers_Manual.pdf

McLaughlin, M. 2011. Tradurre/ Tradire: Translation as a Cause of Linguistic Change from Manuscripts to the Digital Age. UC Berkeley, *The University Library New Faculty Lecture Series*, 4–27. Berkeley: The Doe Library.

Mees, B. 2002. Runo-Gothica: The Runes and the Origin of Wulfla's Script. *Die Sprache* (Vol 43), 55–79.

Meisel, J. M. 2011. Bilingual Language Acquisition and Theories of Diachronic Change: Bilingualism as Cause and Effect of Grammatical Change. *Bilingualism: Language and Cognition* (Vol 14), 2: 121–45.

Miller, D. G. 1994. *Ancient Scripts and Phonological Knowledge*. Amsterdam: Benjamins.

Miller, D. G. 2010. *Language Change and Linguistic Theory*. Oxford: Oxford University Press.

Miller, D. G. 2019. *The Oxford Gothic Grammar.* Oxford: Oxford University Press.

Moon, A. 2010. Reduplicating Verbs in Gothic and Old English: An Optimality-Theoretic Analysis. *English Language and Linguistics* (Vol 16), 225– 248.

Mottausch, K. H. 2013. *Untersuchungen zur Vorgeschichte der germanischen starken Verbs: Die Rolle des Aorists.* Hamburg: Kovač.

Nielsen, H. F. 2017. The Phonological Systems of Biblical Gothic and Crimean Gothic Compared. In Jana Krüger, Vivian Busch, Katharina Seidel, Christiane Zimmermann and Ute Zimmermann (eds.), *Die Faszination des Verborgenen und seine Entschlüsselung – Rāđi sa kunni: Beiträge zur Runologie, skandinavistischen Mediävistik und germanischen Sprachwissenschaft*.Boston: De Gruyter, 277-290.

Pimenova, N. 2017. "Figur", "Grund" und Narrative Kontinuität in der Grammatikalisierung des gotischen Protoartikels. *Zeitschrift für Germanistische Linguistik* (Vol 45), 3. https://doi.org/10.1515/zgl-2017-0020

Project Wulfila. 2004. *UFSIA*. Belgium: University of Antwerp. Available to download: http://www.wulfila.be/gothic/download/

Raschellà, F. D. 2011. Models and Principles of Wulfla's Gothic Alphabet: Some Methodological Remarks. In E. Glaser, A. Seiler and Waldispuhl (eds.),
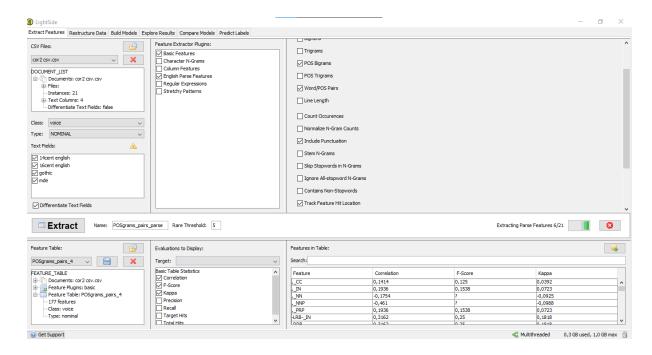
*LautSchriftSprache. Beiträge zur vergleichenden historischen Graphematik.*Zürich: Chronos.

Ratkus A. 2009a. The Greek sources of the Gothic Bible translation. *Vertimo studijos* (Vol 2), 37–53.

Ratkus, A. 2009b. On some morphological properties of the adjective in Gothic. *Kalbotyra* (Vol 61), 85-101. 10.15388/Klbt.2009.7640.

Ratkus, A. 2015. Gothic Possessives, Adjectives and Other Modifiers in *-ata*. *Journal of Germanic Linguistics* (Vol 27), 3: 238–307.

Ratkus, A. 2016. Patterns of Linear Correspondence in the Gothic Bible Translation: The Case of the Adjective. *Vertimo Studijos* (Vol 9), 38–55.

Ratkus, A. 2018a. Greek ἀρχιερεύς in Gothic Translation: Linguistics and Theology at Crossroads, *NOWELE* (Vol 71), 1: 3–34.

Ratkus, A. 2018b. This is Not the Same: The Ambiguity of a Gothic Adjective. *Folia Linguistica Historica* (Vol 39), 2: 475–494.

Ratkus, A. 2018c. Weak Adjectives Need Not Be Definite: The Evidence of Variation in Gothic, *Indogermanische Forschungen* (Vol 123), 27–64.

Ratkus, A. 2019. The Stylistic Uses of Gothic Passive Constructions. *Vertimo studijos* (Vol 12), 116– 137.

Ratkus, A. 2020. The (Non-)Existence of the Middle Voice in Gothic: In Search of a Mirage. *Transactions of the Philological Society* (Vol 118), 2: 263- 303. https://doi.org/10.1111/1467-968X.12190

Robinson, M. A. and Pierpont, W. G. 2005. *The New Testament in the Original Greek: Byzantine Text Form*. Southborough: Chilton.

Rousseau, A. 2012. *Grammaire Explicative du Gotique (Skeireins razdōs Gutþiudōs)*. Paris: L'Harmattan.

Rousseau, A. 2016. *Gotica: Études sur la langue gotique*. Paris: Champion.

Schneider, G. and Lauber, Max. 2019. *Statistics for Linguists: A Patient, Slow-paced Introduction to Statistics and to the Programming Language R.* Zurich: Digitale Lehre und Forschung UZH.

Schuhmann, R. 2016. A Linguistic Analysis of the Codex Bononiensis. *Cahiers du CLSL* (Vol 50*)*, 56–72.

Seebold, E. 2010. Die Gotischen Buchstabennamen: Mit einem Exkurs über die Englischen Manuskriptrunen. *NOWELE* (Vol 58), 71–168.

Sitaridou, I. 2014. The Romeyka Infinitive: Continuity, Contact and Change in the Hellenic Varieties of Pontus. *Diachronica* (Vol 31), 1: 23–73.

Snædal, M. 2005/2013. A Concordance to Biblical Gothic: II Concordance. Reykjavík: University of Iceland Press.

Snædal, M. 2013. Gothic Letter (and honeme) Statistics. *Studia Linguistica Universitatis Iagellonicae Cracoviensis* 130: 277–95.

Snædal, M. 2015a. Gothic Contact with Greek: Loan Translations and a Translation Problem. *NOWELE Supplement Series,* 75–90.

Snædal, M. 2015b. Gothic Contact with Latin: Gotica Parisina and Wulfila's Alphabet. In J. O. Askedal and H. F. Nielsen (eds.), *Early Germanic Languages in Contact.* Amsterdam/Philadelphia: John Benjamins Publishing Company.

Snædal, M. 2015c. Gothic *Banja**, *Winja* and *Sunja. Studia Linguistica Universitatis Iagellonicae Cracoviensis* (Vol 133), 2: 97-108.

Snædal, M. 2016. Gothic aibr 'gift, offering'. In E.Mańczak-Wohlfeld and B. Podolak (eds.), *Words and Dictionaries: A Festschrift for Professor Stachowski on the Occasion of His 85th Birthday*. Jagiellonian University Press.

Snow, D. 2013. Revisiting Ferguson's Defining Cases of Diglossia. *Journal of Multilingual and Multicultural Development* (Vol 34), 1: 61–76.

Stearns, M. J. 1978. *Crimean Gothic: Analysis and Etymology of the Corpus*. Saratoga: Anma Libri.

Stiles, P.V. 2005. A Letter in a Letter: A Textual Note on Busbecq's 'Crimean Gothic Cantilena. *Gotica Minora* (Vol 4).

Suzuki, S. 1992. Toward an explanatory account of Thurneysen's Law in Gothic. *PBB* (Vol 114), 28–46.

Suzuki, S. 1994. Final Devoicing and Elimination of the Effects of Verner's Law in Gothic. *IF* (Vol 99), 217–51.

Štrmelj, L. 2020. Old and Middle English Translations of Greek and Semitic Words in the Latin Version of St John's Gospel. *Linguistics Vanguard* (Vol 6), 2. https://doi.org/10.1515/lingvan-2018-0056

Taavitsainen, I. and Schneider G. 2018. Scholastic Argumentation in Early English Medical Writing and its Afterlife: New Corpus Evidence. In: Suhr, Carla, Terttu Nevalainen and Irma Taavitsainen (eds.), From Data to Evidence in English Language Research, 191–221. Leiden: Brill.

Tamašauskaitė, Z. 2013. Gothic Word Order Patterns as Attested in the Gothic Gospel of Luke. *Biannual Scientific Journal "Sustainable Multilingualism"* 3. *http://dx.doi.org/10.7220/2335-2027.3.6*

Thomason, S. G. 2003. Contact as a Source of Language Change. In: Joseph, Brian D. and Richard D. Janda (eds.), *The Handbook of Historical Linguistics*, 686–712. Oxford: Blackwell.

Vázquez-González, J. G. and Barðdal, J. 2019. Reconstructing the Ditransitive Construction for Proto-Germanic: Gothic, Old English and Old Norse-Icelandic. *Folia Linguistica Historica* (Vol 40), 2: 555–620.

Wells, C. R. E. 2009. The Translation of *mellein* in the Gothic Bible. *Interdisciplinary Journal for Germanic Linguistics and Semiotic Analysis* (Vol 14), 2: 233–50.

Wolfe, B. N. 2016. The Bologna Fragments and Homoianism. In A. Auer and M.de Vaan, *Les Cahiers de l'Institut de Linguistique et des Sciences du Langage* (Vol 50), 99–109.

Wolfe, B. 2019. Greek Diminutives in Gothic. *Transactions of the Philological Society* (Vol 117), 2: 256–265.

Wright, J. 1954. *Grammar of the Gothic Language: And the Gospel of St. Mark, Selections from the Other Gospels, and the Second Epistle to Timothy: With Notes and Glossary.* Oxford: Clarendon.

Yáñez-Bouza, N. 2016. May Depend on Me Sending It You: Double Objects in Early Grammars. *Journal of English Linguistics* (Vol 44), 2: 138–161.

Zehentner, E. 2018. Ditransitives in Middle English: On Semantic Specialisation and the Rise of the Dative Alternation. *English Language and Linguistics* (Vol 22), 1: 149–175.

Zironi, A. 2009. Models for the Edition of Gothic Texts: the Case of the Gotica Carolina. *Filologia Germanica* 1: 243 – 272.

APPENDIX I

Running a Sample Query on *LishtSide*

APPENDIX II

Running a Sample Query on *AntConc*