

Language interference in the English used in Ireland

Autor/a: Paula Lojo Sandino

Tese de doutoramento UDC / 2021

Director/a: María Begoña Crespo García

Titor/a: María Begoña Crespo García

Programa de doutoramento en Estudos Ingleses Avanzados: Lingüística,
Literatura e Cultura



UNIVERSIDADE DA CORUÑA

*Begoña Crespo García, profesora do Departamento de Letras da UDC, en
calidade de directora da tese de doutoramento*

"Language Interference in the English used in Ireland"


escrita pola doutoranda Dna. Paula Lojo Sandino, estudante do programa
Oficial Interuniversitario de Doutoramento en Estudos Ingleses Avanzados:
Lingüística, Literatura e Cultura,

FAGO CONSTAR

Que a devandita tese de doutoramento reúne os requisitos formais e
técnicos necesarios para a súa lectura e defensa pública.

A Coruña, 9 de febreiro de 2021

ASDO. BEGOÑA CRESPO GARCÍA

Código Seguro De Verificación	8wzWUkN6wPzZaw3SAKBIEQ==	Estado	Data e hora	
Asinado Por	María Begoña Crespo García	Asinado	04/02/2021 11:58:37	
Observacións		Páxina	1/1	
Url De Verificación	https://sede.udc.gal/services/validation/8wzWUkN6wPzZaw3SAKBIEQ==			

ACKNOWLEDGEMENTS

I would like first to thank my parents for letting me decide my future, making my own mistakes and getting my achievements.

I would like to acknowledge my supervisor, for those never-ending hours, and years, of reading and correcting. Thank you for giving me all the time I needed.

I cannot forget my colleagues, and friends, of MuStE. Without some of them part of my corpus of study would be incomplete. Thank you for your hours of work, and also fun, throughout the years.

And last, but not least, I could not have completed this dissertation without the support of *mo chroí*. We share a linguistic interest and you have always given me your view from the other side. *Go raibh míle maith agat!*

RESUMEN

La interferencia entre dos lenguas es bastante frecuente en situaciones de contacto lingüístico. Irlanda es un territorio en el que diferentes substratos lingüísticos han existido y se han influido mutuamente a lo largo de toda su historia. En la época del inglés moderno tardío, al igual que hoy en día, se hablaban dos lenguas en la isla, irlandés e inglés. Esta circunstancia provocó una interferencia lingüística en el uso del inglés hablado y escrito en Irlanda.

La voz pasiva será la estructura gramatical usada en este estudio para detectar cualquier posible interferencia entre el irlandés y el inglés. Por lo tanto, esta circunstancia será analizada usando un corpus de textos escritos por autores de cada territorio durante los siglos XVIII y XIX, lo que, presumiblemente, nos dará una amplia visión sobre el fenómeno lingüístico a analizar.

Entre los aspectos a considerar se encuentran el tipo de verbos usados con mayor frecuencia en la voz pasiva, la presencia de verbos auxiliares o modales, o el uso del agente pasivo expresado a través de una “by-phrase”. Todas estas características gramaticales se explorarán teniendo en cuenta las variables de disciplina y origen geográfico de los escritores para llegar a una conclusión precisa sobre la interferencia lingüística.

RESUMO

A interferencia entre dúas linguas é bastante frecuente en situacións de contacto lingüístico. Irlanda é un territorio no que diferentes substratos lingüísticos existiron e se influíron mutuamente ao longo de toda a súa historia. Na época do inglés moderno tardío, igual que hoxe en día, falábanse dúas linguas na illa, irlandés e inglés. Esta circunstancia provocou unha interferencia lingüística no uso do inglés falado e escrito en Irlanda.

A voz pasiva será a estrutura gramatical usada neste estudo para detectar calquera posible interferencia entre o irlandés e o inglés. Polo tanto, esta circunstancia será analizada usando un corpus de textos escritos por autores de cada territorio durante os séculos XVIII e XIX, o que, presumiblemente, nos dará unha ampla visión do fenómeno lingüístico a analizar.

Entre os aspectos a considerar encóntranse o tipo de verbos usados con maior frecuencia na voz pasiva, a presenza de verbos auxiliares ou modais, ou o uso do axente pasivo expresado a través “by-phrase”. Todas estas características gramaticais exploraranse tendo en conta as variables de disciplina e orixe xeográfica dos escritores para chegar a unha conclusión precisa sobre a interferencia lingüística.

ABSTRACT

Interference between two languages is quite frequent in language contact situations. Ireland has been a territory in which different linguistic substrata have coexisted and influenced each other throughout all her history. In the Late Modern English period, as it is nowadays, two languages were spoken in the island, Irish and English. This circumstance caused a linguistic interference in the spoken and written use of English in Ireland.

The passive voice will be the grammatical vehicle used in this study to see any possible interference between both Irish and English. Therefore, this circumstance will be analysed using a corpus of texts written by authors of each territory during the eighteenth and nineteenth centuries. These texts belong to two scientific disciplines, Mathematics and History, Which, presumably, will provide us with a broad view of the linguistic phenomenon under analysis.

Aspects such as the most frequent type of verbs used in the passive voice, the presence of auxiliaries or modals, or the by-phrase agent will be considered. All these grammatical features will be explored according to the variables of discipline and geographical provenance of writers in order to reach an accurate conclusion about linguistic interference.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS.....	iii
RESUMEN	v
RESUMO.....	vii
ABSTRACT.....	ix
TABLE OF CONTENTS.....	xi
LIST OF TABLES.....	xiv
LIST OF FIGURES.....	xv
INTRODUCTION.....	1
0.1. Objectives.....	4
0.2. Methodology.....	5
CHAPTER 1. LANGUAGE CONTACT IN IRELAND AND GREAT BRITAIN..	9
1.1. Introduction	11
1.2. Language contact.....	11
1.3. A cultural history of linguistic strata influencing Irish and English.....	16
1.3.1 Ireland.....	16
1.3.2. Great Britain.....	25
1.3.3. Scotland.....	28
1.4. Periodisation of English and Irish	30
1.4.1. Periodisation of Irish.....	30
1.4.2. Periodisation of English.....	35
1.4.3. Periodisation of Scottish	37
1.5. Some traces of other languages.....	38
1.5.1. Ireland.....	38
1.5.2. Great Britain.....	40
CHAPTER 2. LATE MODERN ENGLISH AND THE SCIENTIFIC	
DISCOURSE.....	45
2.1. Introduction	47

2.2. Before Late Modern English.....	47
2.3. Eighteenth-century English.....	48
2.4. Nineteenth-century English	51
2.5. Scientific discourse	52
CHAPTER 3. THE PASSIVE VOICE.....	61
3.1. Introduction	63
3.2. Structure of the passive voice	64
3.2.1. Formation of the passive.....	73
3.2.2. Types of passive constructions.....	74
3.3. Some restrictions on passive constructions.....	80
3.4. A historical perspective of the passive voice.....	90
3.5. Verbs involved in the passive: be / get	96
3.6. Pragmatic interpretation	102
3.7. The passive voice in Irish	103
3.8. The passive voice in Scottish.....	107
CHAPTER 4. CORPUS MATERIAL.....	111
4.1. Introduction	113
4.2. Description of selected texts.....	113
4.2.1. Some information on text typology and register.....	117
4.3. Authors of scientific texts.....	124
4.3.1. Author biographies.....	125
4.3.2. Comparison of authors.....	133
CHAPTER 5. DISCUSSION.....	141
5.1. Introduction	143
5.2. Quantitative analysis	145
5.2.1. Variable: discipline.....	147
5.2.2. Variable: geographical provenance.....	155
5.3. Verb typology in passive constructions	157
5.3.1. Classification of verbs by function and meaning	166
5.4. Other features of the verb phrase.....	174
5.4.1. The by-phrase (and the truncated form).....	174
5.4.2. Reduced form of the passive voice	178
5.4.3. Modal verbs	181

5.5. Passive structures in individual authors	184
CHAPTER 6. CONCLUSIONS.....	189
REFERENCES.....	199
APPENDIXES	221
APPENDIX 1. LIST OF TEXTS IN THE CORPUS	223
APPENDIX 2. MAP WITH THE PLACE OF BIRTH OF THE AUTHORS.....	229
APPENDIX 3. RELATIONSHIP BETWEEN MODERN CELTIC LANGUAGES	231
APPENDIX 4. MAPS OF THE EVOLUTION OF CELTIC LANGUAGES IN IRELAND AND GREAT BRITAIN	233
APPENDIX 5. RESUMO.....	235

LIST OF TABLES

Table 1: Periods in the Irish language

Table 2: Periods in the English language

Table 3: Periods in the Scottish language, Scots

Table 4: Mathematics: authors and texts

Table 5: History: authors and texts

Table 6: Elements in the passive structure

Table 7: Results in sub-corpora Mathematics and History (raw figures)

Table 8: Elements in the passive structure. Comparison between Mathematics and History (normalised figures)

Table 9: Elements in the passive structure. Results in the British authors, sub-corpus Mathematics (raw figures)

Table 10: Elements in the passive structure. Results in the Irish authors, sub-corpus Mathematics (raw figures)

Table 11: Elements in the passive structure. Comparison between British and Irish authors in Mathematics (normalised figures)

Table 12: Elements in the passive structure. Results in the British authors, sub-corpus History (raw figures)

Table 13: Elements in the passive structure. Results in the Irish authors, sub-corpus History (raw figures)

Table 14: Elements in the passive structure. Comparison between British and Irish authors in History (normalised figures)

Table 15: Results in sub-corpora Great Britain and Ireland (raw figures)

Table 16: Elements in the passive structure. Comparison between British and Irish texts (normalised figures)

Table 17: Verb typology in British authors

Table 18: Verb typology in Irish authors

Table 19: A semantic taxonomy of verba dicendi (Crespo 2012b: 209-210)

Table 20: Results found in individual texts

LIST OF FIGURES

- Figure 1: Attendance to University
- Figure 2: Profession of authors
- Figure 3: Profession of authors according to provenance
- Figure 4: Age of authors when the selected texts were published
- Figure 5: Scottish Gaelic spoken in Scotland in 1834. From Ravenstein (1879: 592)
- Figure 6: Irish-speaking areas in Ireland in 1851. From Ravenstein (1879: 582)
- Figure 7: Number of words in the corpus
- Figure 8: Passive verbs in Mathematics (normalised figures)
- Figure 9: Passive verbs in History (normalised figures)
- Figure 10: Verbs in Mathematics texts by British authors
- Figure 11: Verbs in Mathematics texts by Irish authors
- Figure 12: Verbs in History texts by British authors
- Figure 13: Verbs in History texts by Irish authors
- Figure 14: Most frequently used verbs
- Figure 15: Verbs in Mathematics texts
- Figure 16: Verbs in History texts
- Figure 17: Most frequently used verbs in texts by British authors
- Figure 18: Most frequently used verbs in texts by Irish authors
- Figure 19: Use of the by-phrase agent
- Figure 20: Comparison of the use of the by-phrase agent in Mathematics and History
- Figure 21: Comparison of the use of the by-phrase agent in Mathematics (raw figures)
- Figure 22: Comparison of the use of the by-phrase agent in Mathematics (normalised figures)
- Figure 23: Comparison of the use of the by-phrase agent in British and Irish texts (raw figures)
- Figure 24: Comparison of the use of the by-phrase agent in British and Irish texts (normalised figures)
- Figure 25: Use of the auxiliary verbs in the corpus
- Figure 26: Comparison of the use of the auxiliary in Mathematics and History
- Figure 27: Comparison of the use of the auxiliary in Mathematics (normalised figures)
- Figure 28: Comparison of the use of the auxiliary in History (normalised figures)
- Figure 29: Use of modal verbs in the corpus

Figure 30: Comparison of the use of modal verbs in Mathematics (normalised figures)

Figure 31: Comparison of the use of modal verbs in History (normalised figures)

Figure 32: Comparison of the use of modal verbs in Mathematics and History

INTRODUCTION

There are different ways of communicating in the world, but language is the main one. Several are the definitions of this word, and more than one of these definitions are relevant here. According to the *Longman Dictionary of English Language and Culture* (1992), the first definition of language is “the system of human expression by means of words”. This would be the definition everybody would think about out of any context.

The second definition on the dictionary goes a step beyond, “a particular system of words, as used by a people or nation”. Here we can see there are different languages in the world, depending mainly on the geographical factor. But we can still go beyond with the fourth definition, “a particular style or manner of expression”.

I am going to deal with these three definitions (there are up to five definitions of language in the *Longman Dictionary*), all of them related with each other. It seems obvious to use the first definition since that is the vehicle used to communicate in most situations. In the case of the second definition, it is relevant here as although all the texts are written in English, another language from a specific country will have to be taken into consideration as well: Irish. Regarding the third definition, the texts used are scientific texts, so the language will reflect that particular register, I will be dealing with: English scientific register.

Introduction

It is important to remark that a language, considered as the second definition, although being specific from a people or nation, changes continually, is influenced by other languages and cultures and is not restricted to a single localization; that is why languages are sometimes so difficult to characterise.

0.1. Objectives

The aim of this work is to see the linguistic interferences present in the English language used in Ireland in the eighteenth and nineteenth centuries in a grammatical sense, by using the passive voice as a central aspect of this possible interference. In order to analyse these linguistic manifestations, texts from two different disciplines, Mathematics and History, have been chosen. The reason why I have decided to work with two different disciplines is because, as Seoane and Hundt (2018: 4) have explained, “academic writing involves sets of rhetorical choices which vary according to the discipline with which one wishes to engage”. Not all the texts selected are academic, but the statement is valid for all of them; they date back to the eighteenth and nineteenth centuries, and the distinction between types of texts, at least in the eighteenth century, was not so clear as it is today, and sometimes the boundaries were blurred.

Since the linguistic influence on the English language is going to be analysed when used in the Irish context by Irish writers, the texts selected belong both to British and Irish authors. These authors have not been selected specifically because of their position in society or education; therefore, they could come from different backgrounds and interests. Thus, their texts would reflect the way they speak, “from a particular social position belonging to a social network and having access to symbolic resources drawing upon socio-economic power and knowledge.” (Evans, 2015: 30) What is interesting here is to find out if they could speak Irish, in order to see up to what extent that ability could have influenced their use of English.

The study and methodology of this dissertation can be included within the framework of sociolinguistics, specifically in historical sociolinguistics. This term seems very appropriate here since it implies the study of the relationship between language and society in its historical dimension. According to Auer et al. (2015: 7), historical sociolinguistics deals with issues related to the way “language(s) and varieties

are embedded in complex societies, such as multilingualism and code-switching; migration, language contact and their consequences”.

Language contact is one of the two main concepts to be dealt with in this study, together with that of interference, in the pages devoted to Chapter 1.

However, all this work is based on the presence or lack of possible linguistic interferences from Irish into English. As Turaeva (200: 94) points out, “interference is understood as both the process and the result of the interaction of language systems in bilingual speech, one of which is dominant, affecting the secondary, acquired language system”.

This mechanism of interference can work in two different senses; it can replace the models and schemes of the secondary language with those from the native one; or it can modify the native language following the patterns of the secondary one. In this particular study, my interest will be the influence Irish (as native language) may exert on English (as secondary language), using the passive voice as the linguistic structure where this possible interference can be traced.

0.2. Methodology

As explained in the objectives, the texts selected for the analysis belong to the disciplines of Mathematics and History, but the authors of those texts will be of either Irish or British origin in a similar distribution. Following Ashwell’s words, “one way of investigating how the passive is actually used is to look at a language corpus” (2018: 60), and that is why this will be a microanalysis corpus-based work, with the passive voice as the centre of investigation. As Pahta and Taavitsainen (2009) point out, the most frequent method used in English historical linguistics is that of corpus linguistics, “and it is widely used in analyses of scientific writing as well” (2009: 561).

The corpus gathered for the present dissertation comprises two centuries, with two disciplines and two countries of origin. Samples have been selected every 25 years from each discipline and each geographical origin, which makes a total of 36 texts. The passive voice will be analysed in all these texts, together with the main elements found in the passive structure, such as the verb itself, the auxiliary verb accompanying it, or the by-phrase acting as the agent of the passive verb.

Introduction

In order to contextualise the topic and account for the sociolinguistic scenario, some background knowledge will be offered from different points of view before the analysis itself. This background will be explained in Chapter 1, including a historical perspective of the geographical regions to be working with, Ireland and Great Britain¹. Some considerations on the languages spoken there from early times to the eighteenth and nineteenth centuries will be also described. This will be followed by another description on the evolution of these languages and their contact with other languages. The second chapter will be mainly devoted to the centuries to which the text samples belong, different ways of understanding periodisation and the development of scientific discourse.

The next chapter, Chapter 3, focuses on the grammatical topic of this work, the passive voice. This chapter includes the formation, structure and kinds of passives, the restrictions the passive voice can have and the verbs used to form it, a historical perspective and pragmatic interpretation, and also a brief but concise section about the passive voice both in Irish and Scottish, in order to see any possible interference when analysing the texts.

The different text typology will be treated in Chapter 4, together with the description of the authors and texts selected for the analysis. It contains the information about the corpus material. The results of the analysis will be shown in Chapter 5, taking into account the different variables and the classifications made with the results obtained. The conclusions will be offered in Chapter 6.

In order to obtain reliable results, a comparison between different sub-corpora will be made (Mathematics and History, Irish and British, Irish Mathematics and British Mathematics, Irish History and British History), as well as an analysis of the corpus as a whole, with all the texts included. All passive structures will be taken into account, together with their main elements, and the results will be given both in number and in percentage (raw or normalised frequencies depending on the cases), so the conclusions will be easily reached.

A final comparison between individual authors and their texts will also be made. This comparison might lead to different results than when comparing sub-corpora, and thus, the conclusions could differ.

¹ When I speak about Ireland and Great Britain, I am referring to the islands themselves, not to any political or governmental region, only geographical territories.

Since I started working on this dissertation many years ago, I encountered some problems which should be mentioned before I go further. The first difficulty I had was finding the texts, and that is the reason why my corpus comprises texts from 1725 to 1925; it was impossible for me to find all the texts required for the first 25 years of the eighteenth century. Besides, some of the texts I could find were extremely difficult to consult. Archivists and librarians from libraries in Ireland photocopied these texts for me as nobody was allowed to even touch the books. In fact, I simply got access to a couple of texts for a short period of time.

Some of the texts I selected for this study are still in paper, not in digital format, and I had to read word by word of the whole text and take notes on the features I wanted to analyse. It was a manual analysis, and this is one of the reasons why pages are not cited in those examples extracted from the texts. However, there is another reason for this absence of page numbers. Those texts I could only examine and analysed for a short period of time were no longer available, and I did not write down the pages where all the occurrences were. Thus, I have decided not to write any page number on the examples from the texts analysed.

In the following pages I will introduce the concept of language contact and I will refer to the cultural history of both languages under study, Irish and English.

CHAPTER 1. LANGUAGE
CONTACT IN IRELAND AND GREAT
BRITAIN

Language contact in Ireland and Great Britain

1.1. Introduction

As it was stated in the introduction to the dissertation, language contact is one of the key concepts in this study. This chapter will focus on this concept, through a review of the literature in general and by applying what the term implies to Ireland and Great Britain, in particular. The languages spoken in those countries will be also analysed from their early times to the eighteenth and nineteenth centuries; as well as the traces of other languages which might be also present.

1.2. Language contact

The way people learn a new language may be influenced by their mother tongue, and also through contact with the native speakers of the new language; thus, they will adopt as their own expressions, vocabulary and also structures from the new language present in the area. This development does not happen automatically, it takes years, sometimes centuries to reach a level of influence which can be clearly identified. This

new language will be considered the same by the original speakers, but actually it could only be a variety of it.

Thus, we have a standard language, and many varieties of that language. But we do not have to think that the standard form is better than any of its varieties, or that these varieties are inferior to the standard form (Leith, 1992). The variety of the English language spoken in Ireland is not inferior in any way to standard English. The only reason why one of these languages is the standard form and the other one is not, is because when those with the power had to decide how the standard language would be, it was the variety spoken in England the one selected. Actually, it was the variety spoken in the area of London the one chosen, and this seems reasonable because London was the centre of power and government (Freeborn 1998, Right 2000, Hickey 2013). This standard was brought to Ireland with all its rules; however, Irish people have adapted it to their daily life and needs, and it has become a more useful way of expressing themselves, even when that language had been imposed on the island. This variety has not changed overnight; the process of modification has been long, and to a great extent caused by the existence of a well-established language in the country before the introduction of English: Gaelic Irish.

One of the reasons why new linguistic varieties emerge is the presence of more than one language in areas where different groups of people live together. This brings about what is known as *language contact* situations.

“Language contact takes place between speakers of different languages in contact situations. In order for communication to take place, speakers must arrive at a certain degree of comprehension of the other language and must acquire a degree of facility in producing utterances that will be comprehensible.” (Lehiste 1988: 1).

Since the imposition of English in Ireland, speakers have had to learn both languages from communication purposes as in any other bilingual area.

This phenomenon detected in Ireland is widely spread all around the world, language develops no matter what the circumstances are. “Language contact is everywhere: there is no evidence that any languages have developed in total isolation from other languages” (Thomason, 2001: 8), and in places where nowadays we have more than one language coexisting, language contact is very likely to happen. What

happened in Ireland was an invasion of a people who brought their own language to the new territory. From that moment on, the language of the native inhabitants and the language of the invaders developed being mutually influenced, there was a parallel development of both languages in the same territory and speaker had to learn both languages to communicate.

However, nowadays there are places where two languages can live together, in the same territory, but whose development is independent from the other and there is not such an influence between them. An example could be that of migration, where whole families move from one country to another in search of a new life with better options. When they arrive to a new place, if there are more people with the same origin, they all will try to maintain themselves together, so as not to lose their origins. In these cases, the entire community speaks one language, and the rest of the population speaks something different; both languages live together, but they do not develop together. In some cases, people from these new communities do not have any knowledge of the language outside, mainly old people. In these cases the two languages do not develop being mutually influenced, at least not to all speakers.

Using the most elementary definition, languages in contact are those which coexist in the same place and time, and therefore they are in contact with each other. “Sometimes speakers of two or more languages live together in a single community.” (Thomason, 2001: 4) This fact can lead to different situations, being the most frequent, the learning of the several languages by the people living in the area, so they can communicate; and this usually leads to bilingualism, or to multilingualism. Bilingualism can be defined, in Bynon’s (1977: 172) words, “as the co-existence within a single speaker’s competence of more than a single grammar.” If all the languages in contact have the same degree of importance in the life of the inhabitants, they all will be learned. However, when one language occupies a position of power, the vast majority of the people will only learn that language, leaving the others for ordinary or everyday speech. It is not anything relating to the languages themselves what decides which language is ‘more important’ than the other one, but it is all related to external sociocultural reasons, and the ‘prestige’ one of those languages has (Bynon, 1977). Following this pattern, people in Ireland can speak Irish and English as well, but not all English speakers can speak, or at least, understand, Irish. The reason is that English, as the language of prestige in Ireland, has been learnt by its native inhabitants. As

Thomason (2001: 18) points out, “the British Isles offer a prime example of language contacts arising through successive immigrations, in this instance mostly military invasions and conquests.”

The ways in which languages can come into contact are several, but the main one occurs when a “substantial group of newcomers to a formerly linguistically homogeneous territory” (Lehiste 1988: 60) arrive at a different one, with its own language and culture. After this, three different situations may happen. The first case is that both groups of people continue speaking their own languages, mainly because the relationship between the two groups is not very frequent. Another possibility is that the newcomers impose their language on the natives, displacing the language spoken in the area before their arrival. Finally, the language of the inhabitants of the territory may prevail upon the new one. Throughout the history of Ireland more than one of these cases can be traced. The Vikings (newcomers) were absorbed by the Celts (natives), including their language. The third case took place from the Celts’ control of the island, to the Anglo-Norman invasion; all the peoples who tried to invade Ireland were submitted by the Celtic language and culture. However, with the introduction of English in the isle, the situation was quite different. In this case, the prevailing language in the island changed to English, but this new language could not replace Irish completely, and both languages survived after a period of conflict, during which they fought to maintain their presence in the island; English tried to impose its ‘prestige’ and its power as conqueror, whereas the intention of Irish was simply to keep alive (the vast majority of the population spoke Irish). Lehiste (1988: 60) tells us that “when the original inhabitants adopt the language of the newcomers, we may assume that during the period of bilingualism they speak the new language with a certain degree of interference from the primary language.” This interference might be due to the difficulties for human beings to adopt a new language without using their own to learn it. This can be observed in the English spoken in Ireland, where Irish people had to employ structures and even vocabulary from Irish to complete their limited knowledge of English. Lehiste (1988: 60) goes on explaining that “if after the shift these elements from the primary language are transmitted to later generations of speakers of the prevailing language, they constitute the substratum of that language.” On the contrary, if the newcomers are linguistically absorbed into the native population, we have to talk about superstratum. This happens in bilingual areas in which there is an influence of the secondary language

upon the primary one (which could be here represented with Irish and English, respectively).²

At all levels of grammar in the English spoken in Ireland we have lots of examples of the influence from the Irish substratum.

Discoveries made in the most recent research have, however, considerably changed the picture: besides the Irish substratum, the Early Modern English, and now even the Medieval English, superstratum has increasingly come to be mentioned as a possible source of some of the allegedly clear cases of substratum transfer. (Filppula, 1990: 42).

Some anthropologists consider language contact as only one aspect of culture contact, and define language interference as a fact of cultural diffusion and acculturation (Weinreich, 1979). Since language contact involves culture contact, a language change also involves a culture change, but only to a certain extent. “Culture change normally involves not only the addition of a new element or elements to the culture, but also the elimination of certain previously existing elements and the modification of the others.” (Linton in Weinreich, 1979: 5). The Irish culture changed to acquire the English culture. However, the Irish cultural roots remain as long as the language is present in the country. People have the Celtic culture in their minds; they are becoming more and more multicultural, but Ireland is the Celtic country par excellence. Apart from all the stereotypes surrounding the Celtic myths — leprechauns, fairies, and the green colour — Ireland has something which belongs to herself, her own language. And when invaders arrived in Ireland and tried to impose their languages, Irish people were not willing to surrender to these foreigners and forget about their own language to the benefit of the new one; for them their language was a sign of identity.

As we have already stated, the way people from a certain country speak depend on their history and contact with other peoples. The English language used in the United

² By extension of terminology, as Filppula (1990) points out, it is also possible to speak of “substratum languages” when we refer to the languages of the native populations who were linguistically conquered, and speak of “superstratum languages” making allusion to the languages of the conquerors, who were linguistically victorious.

Ní Ríordáin (2013: 1582) speaks of *subtractive bilingualism*, which occurs “when an individual’s first language and culture are replaced by the new language and culture, usually occurring in a pressurised environment.” However, the Irish language and culture were not completely replaced.

Kingdom is considered as the Standard English language, although the same variety is not employed everywhere in the country; depending on the region, the accent and expressions will vary, but as a whole it is considered the standard language.

Undoubtedly, the main interest for this study is the relationship between the Irish and the English languages. However, that is only the last link in a chain, and in the same way the language of Ireland kept on changing throughout the years, what happened in Great Britain was not different; that is to say, that language contact is relevant as well in Great Britain, since the English language did not appear suddenly. It is necessary to visit prehistoric times to see how English was formed, although, as Hodgkin (1906:1) says, “the history of England if we wish to take it in its narrowest sense begins with the migrations of the Angles, Jutes and Saxons in the fifth century after Christ.”

This historical overview of Irish and English will be analysed more deeply in the next couple of sections.

1.3. A cultural history of linguistic strata influencing Irish and English

The language present nowadays in any country is the result of a long process throughout years and centuries. In Ireland and Great Britain, the languages spoken derive from a language contact originated by the coexistence of different groups of people with different vehicles of communication in several periods of times.

The way how these Irish and English speakers became so, and how they lost their power (in the case of Ireland, and also in Scotland in Great Britain), linguistically speaking, is a long-term process in which different events have moulded the current status and form of these languages as will be seen in the pages that follow.

1.3.1 Ireland

1.3.1.1. Prehistoric peoples

Although what we are interested in is the linguistic aspect of the different peoples of Ireland, in order to be able to trace back the origins of the first inhabitants of the isle, we must rely on what archaeologists tell us. There are no written witnesses of these people, however, archaeology shows us that in the Neolithic period, around the year 8000 BC, a group of people arrived in Ireland, probably crossing the land bridge, existing at that time, from Scotland.

The next information available, again thanks to archaeology, is the arrival of a new group, this time around the 3000 BC (the Stone Age). These people are the responsible of Newgrange, the most important archaeological site in Ireland. Linguistically speaking, we do not know anything about them either, and we will still have to wait more than two millennia to find a new people to establish, this time leaving behind a language to inherit.

1.3.1.2. The Celts

It is not known the exact date when the Celts arrived — some say around the 600 BC, others c. 200 BC —, but what we know for certain is that their appearance in Ireland dates from around the middle of the first millennium BC (the Iron Age).

The Celts provide us with the first traits of the Irish language and culture. As Ó hEithir (1987: 21) points out: “The strongest strands in that culture, apart from the language, were religion and law. The religion was Druidism, administered by a priesthood of druids. The laws were written and interpreted by a class of professional lawyers known as *brehons*.”

The first time in history we find the name Celts is through the Greeks, who also called them *Keltoi* (Chadwick 1997, Renfrew 1990), and also through the Roman ethnographers and historians, and they were identified as a different people who spoke a different language. They “had dominated central and western Europe” (Duffy, 1997b: 14) before arriving in Ireland. Those Celtic peoples spoke a language which developed into Gaelic, but they did not invent that language. “Celtic has been long recognised as a branch of the Indo-European family of languages” (MacAulay, 1992b: 3). Within the Indo-European family, we can find the Celtic, Italic, or Germanic branches. Gaelic Irish belongs to the Celtic family, and English forms part of the Germanic branch, which

proves that they have some common characteristics, even though that goes back to the very first origin.

The Celtic family of languages is commonly agreed to be divided into two branches: Goidelic (or Q-Celtic) and Brythonic (or P-Celtic). The Goidelic branch includes Irish, Scots Gaelic, and Manx, although some authors state only Gaelic Irish derives from the Goidelic branch, because Scots Gaelic and Manx are varieties of Gaelic Irish. And from the Brythonic branch we find Welsh, Comish, and Breton. However, not all these languages are still alive; some of them have already died out (Renfrew 1990).

The main difference between these two branches is basically phonetic; the development of a sound in Celtic into two different sounds is what provoked the division. The sound /kw/ appears in the Goidelic branch — that is why it is also called Q-Celtic —, while in the Brythonic branch the equivalent sound is /p/ — from which P-Celtic comes (Renfrew 1990).

As MacAulay (1992:12) has pointed out “the first evidence we have for the presence of Q-Celtic in Ireland dates from the period of the Ogam inscriptions between the first and the sixth centuries AD.” These inscriptions constitute the only sign of language in Ireland until the introduction of Latin in the fifth century. This “language” consists of little lines or marks carved in wood or stone, usually in funeral gravestones. “The alphabet consisted of strokes crossing either vertically or obliquely with a central line or cut on either side of them.” (Purdon, 1999: 15) This method is quite similar to that of the old runes, and it was not very useful for long texts, and that is why until the introduction of Latin we do not have texts in Celtic.

Latin was introduced in Ireland alongside Christianity. In the year 431, the Pope sends Palladius to Ireland as bishop to the Irish Christians. It will be in the following year — 432 is considered to be the traditional date for this arrival — that St Patrick arrives to help convert pagan Gaelic kings to Christianity. It “brought in its wake a new literacy in so far as the traditional Latin alphabet was adapted for the native language.” (MacAuley, 1992: 12). There was an important problem; in the Latin alphabet there were less letters than sounds in Irish. That is why in Irish the different combinations of letters can be pronounced in different ways; they had to adapt the letters and the sounds, and since all the letters were already chosen and sounds left without, some sounds took more than one letter. But this does not mean that this new alphabet is “a development

from or an ‘improvement’ on ogham writing, but something with quite a different purpose.” (de Paor, 1985: 108)

Together with this introduction of Latin in the lives of those Celtic people came learning and literature. People can write, and it is now that the first written documents appear. However, although the Latin alphabet was used as an instrument to write Irish, the language was influenced by the new one, with new vocabulary items, which have reached our days through centuries, invasions and influences from different peoples.

1.3.1.3. The Vikings

In the 8th century, the Vikings tried to conquer Europe from the western part. It is not until the year 795 that they arrived in Ireland, assaulting island monasteries off Ireland’s coast (Duffy, 1997b). They tried to establish themselves in the island, but they did not have enough strength to defeat the Celts, “and from the mid-9th century, although they still threatened to overwhelm the country, one finds Irish kings successfully defeating them in battle.” (Duffy, 1997b: 24)

By the mid-850s these raids became less frequent, and the Vikings moved their attention to other lands. However, in 914 we have a new record of Viking raids in the country again. This time they entered through Waterford, attacked Munster and Leinster, and even re-occupied Dublin, having good results on this occasion in battles against the Irish kings. But once more, the Celts had more power, and the Vikings were finally expelled out of the island around the year 950.

At the same time this was happening in Ireland, the Vikings were also trying to conquer other places in the world, and it is quite obvious that if they reached Ireland it was through Great Britain. They were present in the whole island, and in England they were also a threat.

From this period of war against the Vikings, we do not have much influence in the language. The Viking or Norse people were absorbed by the Celtic one, including the language they spoke, that is why a transfer from one language to the other was not possible. However, minor Norse influences are present in the Irish language, with examples in regions more influenced, where words relating to fishing, shipping and trade still remain in the vocabulary of the inhabitants of those areas.

1.3.1.4. The Normans

From the Celts to the Normans, we cannot find any important people who could set a threat with an invasion or settlement. Everything had been unsuccessful, and against the Celts nothing had proved to be powerful enough to defeat them. Until the arrival of the big threat to the Celts, the Normans.

In the 12th century England took a look to that small island on the West, alone in the middle of the ocean, and waiting for them to be conquered. A hundred years after the Norman Conquest in England, “Diarmait MacMurchada’s expulsion from Ireland set in a train a series of events which within ten years saw the kings of Ireland accept the king of England as their lord and saw vast parts of the island fall into the hands of English barons.” (Smith, 1997: 36) The arrival of English military leaders did not happen until 1169, being this not the main threat in the island, but the different culture. This date of 1169 is important in the sense that it is the official date for Ireland to become an English colony. And this fact would remain until the 20th century, with the Easter Rising in 1916 and the Irish Independence in 1921.

However, those who tried to conquer Ireland this time were not English as we know them today. They were English because they came from England, but they actually were Normans. A century earlier the Normans had completely conquered England, and now, these Anglo-Normans tried to do the same in Ireland. In only one century they gained the control in two-thirds of the country, but in the following one hundred years they lost power, and the Irish reconquered their own territory. Not only did they win the battle in relation to the land, but they also managed to convert their enemies. Norman men ended up marrying Irish women, giving as a consequence the saying that they became more Irish than the Irish themselves (“*Hibernicis ipsis Hiberniores*”). But if the Normans were more and more Irish, the Irish were forced to become more and more feudal; they were the ones who first introduced politics in the island.

This new culture included something else, a new language. This time the establishment of a new group of people did not provoke a transfer of vocabulary from one language to the other. In the same way the Celts had defeated all the previous

invasions and their language had prevailed amongst those of the intruders, now, although English people had already established in Ireland, they began to learn and speak the language of the native inhabitants. They even started relationships with native women, and shared their lives. The result of these relationships and marriages was that the offspring was half “English” on the father’s side, but would inherit the Celtic culture from their mother, giving no option to the new culture and language.

This circumstance was not particularly approved in England, where the kings could see that they were actually not gaining a new territory, but losing their military forces in favour of those who they wanted to conquer and submit. In order to stop this situation and to avoid the Irish people to end up “conquering” them, a new law was promulgated in 1366, the Statutes of Kilkenny. This was the first attempt to decrease the influence Irish people had over English, and what the law did was “to prohibit the English from speaking the Irish language, marrying Irish partners or fostering children with Irish families.” (Smith, 1997: 44) What was intended from the English crown was to confront Irish and English, because they did not have a language in common — since the English were not allowed to learn and speak Irish and the Irish could not speak English —, and their relationships were put to an end. With these new orders, the English people in Ireland had no other option than to “fight” against those who until that moment had been their “allies”. However, this law was not effective, and “Irish retained its dominance, and, indeed, by the 14th century it was spoken by an increasing number of settlers.” (Kelly, 1997: 94)

The Statutes of Kilkenny did not allow the English to speak Irish, and if it was not successful with English people, we can easily deduce that Irish people continued speaking Irish. Following those Statutes, new laws were created to diminish the influence of Irish in daily life, with punishments and suffering, but nothing had effect.

The next step to be taken from England was in the hands of Henry VIII, who decided to proclaim himself, through the Irish Parliament, “King of Ireland” in 1541. After his proclamation, by way of an edict, he made the first pronouncements about the Irish language since the Statutes of Kilkenny, to prevent the greater Gaelicisation of the island. Through this edict, all the subjects of the new king should speak and use the English language.

The following kings, after Henry VIII’s death, did nothing of relevance to remove the Irish language from Ireland. What is more, they even allowed its use on

some occasions, above all during the reign of Elizabeth I. She came to the throne in 1558. In this period Irish was used by the Anglican clergy, and encouraged by the crown, so they could reach the vast majority of inhabitants in the island and teach them in an appropriate way.

But that was the only exception, because there was a “refusal to see Gaelic society in its integrity.” (Palmer, 2001: 74) Elizabeth I was the one who ordered the creation of the College of the Holy Trinity to educate Irish youth, of course in an English and not in an Irish way —the Trinity College was, in its beginnings, restricted to Protestants; Irish was taught, but only with the purpose of being able to communicate with the unlearned Irish citizens in order to convert them. If she could convert the elite to Englishness, she would have the power of the country on her side, and that way she would be able to convert the whole country.

It was not until this century that religion began to be identified with patriotic resistance. This had not happened before, when Christianity entered the country and found there the Celtic culture and tradition, but that was because people did not see that change as something imposed, it was just a progressive change. However, during the 16th century, people identified a difference in religion, which became a weapon to fight against. When the Anglo-Normans first invaded Ireland, their religion was the same as the Irish. But the most powerful attack against everything relating to Irish, had to do with the establishment of Anglicanism in England, with Henry VIII. At this stage Irish people had a new objective to fight against; English did not only settle there imposing a new language and reserving privileges for those who wanted to change and become “English”, but they also wanted to impose a new religion, and that was something Irish were unwilling to accept.

During the second half of the 16th century, rebellions against the English took place, but they were not successful. Irish people could do nothing against the establishment of the English language in their own country. As for the communication, Irish was not used, but English, and its influence was not eradicated. This was something in favour of the Tudors when they tried to reconquer Ireland, this time focussing on the aristocracy. This way, “by the early 17th century, the native aristocracy, the principal patrons of Gaelic culture, had been overthrown, and the language lost its ascendancy.” (Kelly, 1997: 94) Once the aristocracy was converted to English, anyone wanting to gain social or economic prestige should learn and had quite a good command

of English. Now the Irish language was playing to the detriment of those speaking their native language, because they had no power; the power of the country was in the hands of those speaking English. Irish soon became to be seen as the language of the poor and illiterate people. This same situation happens in most cases where a minority language co-exists with a majority one. Exactly the same case occurs in Galicia, Northwest of Spain, where the two official languages are Spanish and Galician. Historically speaking, Galician, which had been the native language of Galicia, was almost banished when the Castilian government imposed its language in the area, and people speaking it were considered as unlearned and rude, while the Spanish language had a prestigious status: “The vernacular would be limited to the lower and unlearned social strata that were linguistically and politically subjugated to Castile.” (Crespo, 2004: 48). That is what normally happens when two languages coexist, the use is not arbitrary, but “determined by function and prestige factors.” (Crespo, 2004: 53)

However, contrary to what can be thought, by the early 19th century there were probably more Irish speakers in Ireland than at any time before, around a quarter of the population were monolingual in Irish; all the laws prohibiting and trying to banish the Irish language, had not had the desirable effect. Something which helped the Irish language to maintain its importance was the foundation of the Royal Irish Academy in 1784. This happened in a period when the main thought outside Ireland — from the English — was “that pre-Norman Ireland was sunk in barbarism.” (de Paor, 1985: 156) But with the great Famine in the 1840s, numerous people died, and others had to emigrate. With such a loss, the Irish language also lost speakers, some died, some left the country, and the few remaining, could not fight against the ones who spoke English and were still in the country, those with power. Once more we see that power and language go together throughout history, as we pointed out earlier on about the preference of the language of London to be used for the whole country as the standard language. It is not that one language was best than the other, or that people preferred to speak one to the detriment of the other, but that power and money was related to only one language, social classes were separated through languages.

However, Irish people did not surrender, and at the very end of the 19th century, the word revival appears in Ireland. Everything related to Gaelic had acquired an important role in this new society, and the Irish people wanted to get their roots back to life.

This attempt to bring back to life everything related to the Celtic culture, which also includes language, continues during the beginning of the 20th century, and that is exactly what made republicans fight for their independence, and recover what their ancestors believed in and lived for.³

This Irish Revival combined the Gaelic culture and language with a solid political sense (with the Independence in mind), trying to reconquer what was theirs, that is, their land and independence from the English rulers.

The Irish language has been influenced by the English language in the same sense that it has seen its territory reduced; however, the effects on the English language in Ireland are different. The English language was established in Ireland, following the British rules; however, in a land where the speakers have a different linguistic system internalised, the introduction of something new, has not always had the desirable results, and in this case, the Irish language has played its role. The English language we find in Ireland has been influenced by the Irish tongue, both in its structure and in its vocabulary, and that is what we are going to analyse in the following chapters.

This language is characterised by two main features. On the one hand, the vocabulary used in the English of Ireland is full of English vocabulary already out of date, archaic; on the other hand, part of its vocabulary, syntax, and even verbal system is highly influenced by the Irish language (Dolan, 2003). And this influence is understandable if we bear in mind the fact that those who taught English in the island were native Irish speakers, and generation after generation the language became more and more gaelicised (Ó Baoill 1997). However, in the written aspect, the English language used in Ireland has always been “virtually indistinguishable from the English of England” (Knowles, 1997: 132).

³ The first attempt to achieve this objective came from the Gaelic League (Conradh na Gaeilge), and also from the Gaelic Athletic Association founded at the ending of the 19th century and beginning of the 20th century, 1884 and 1934, respectively. They tried to encourage people to recover their origins, going back to the time of their great splendour as a Celtic people, and bringing it back. They began to use the Irish language as a sign of difference between them and the English “invaders”. The difference between these two associations is their focus; the GAA (Gaelic Athletic Association) wanted to bring back to life all those sports with a Celtic origin — Gaelic football and hurling —, and the Gaelic League wanted a revival in the Irish language. Their final aim was the same, a revival of the Gaelic tradition in all aspects of life. The literal revival was centred in theatre, and the Abbey Theatre was founded, in Abbey Street, less than 50 metres from O’Connell Street, one of the main streets in Dublin. In this theatre the plays represented rural life, in contrast to those who had the power in the country.

1.3.2. Great Britain

1.3.2.1. Prehistoric peoples

The first inhabitants of Britain, as it happens with Ireland, are not very well testified, and it is archaeology again which leads us to the right way. Following archaeological traits found in Britain, we can deduce that this area was inhabited before the Celtic arrival; that is to say, in the Stone Age, by stone-workers. These inhabitants, as they did in Ireland – as already mentioned above – left traces of their lives, in this case the famous archaeological monument of Stonehenge.

1.3.2.2. The Celts

In line with the history of Ireland, we have no exact date for the arrival of the Celts in what is today known as Great Britain, but they “probably entered the island during the Bronze Age.” (Brinton & Arnovick, 2006: 143)

Of course, the importance this people had in English history is not the same as in Ireland. However, their presence in the island was not unnoticeable, and traces of their language, for instance, are still present nowadays. The reason for this is possibly the many years the Celtic language was spoken in this island, until the Anglo-Saxons established and introduced a new language.

1.3.2.3. The Romans

As we have already seen, it was not until the year 43AD that Latin entered in Ireland. Nevertheless, the date is very different in England, when “Julius Caesar attempted to conquer Britain” (Brinton & Arnovick, 2006: 143) in the year 55BC. Despite the Roman occupation, both peoples lived in harmony, and the Celts continued using their own Celtic language, although some “learned to speak and write the language of their Roman rulers.” (Pyles & Algeo, 1993: 99)

During the period of time the Romans were in Britain, they served as protection for the Celtic inhabitants against the Picts, until the year 410AD, when Rome was attacked by the Visigoths and the troops in Britain had to go back to Rome to help in the fight. Doing this, the Celts were left defenceless against the already-mentioned Picts – coming from the North – and the Scots – Celts as well, coming from Ireland.

1.3.2.4. The Anglo-Saxons

After the leaving of the Romans, we have to trust what Bede says regarding the conquest of Britain, since he is the only one who narrates this part of the history of the country, “Now, when the ravages of the enemy at length abated, the island began to abound with such plenty of grain as had never been known in any age” (Bede's *Ecclesiastical History of England* (731: 28)).

It is in the fifth century when new groups of invaders appear in Britain, - Germanic settlers this time – the Saxons, the Angles and the Jutes. These three tribes “belonged to the great Low German family of nations” (Hodgkin 1906: 80). They were Teutonic tribes, and they not only changed the name of the place they settled on – until that moment Britannia, England from now on – but they also introduced their own language, the Anglo-Saxon, taking the place of the Celtic language, which almost completely disappeared from the island.

As Chambers (1837: 10) says, “from the sixth till the eleventh century, the Anglo-Saxon continued with little change to be the language of England.” The influences the language had during this time are of two different types. On the one hand, in the late sixth century we have the Christianization of the Anglo-Saxons, - through St. Augustine – which is linked to Latin, and thus, its influence on the new language was noticeable. On the other hand, the second source for influence comes from the Vikings.

1.3.2.5. The Vikings

If we remember the history of Ireland, Vikings entered the country for the first time on the eighth century, and since the only way to get to Ireland was through Britain, it means that they were already there. In the late eighth century, and during fifteen

years, “the Vikings gained possession of practically the whole eastern part of England.” (Pyles & Algeo, 1993: 102) These warriors were the Danes – the name given to them by the English – and they were basically Norwegians and Swedish.

What remains in present-day English from this people is mainly seen in certain vocabulary items, mainly words they used in their everyday life, such as *knife* or *window*, as well as certain affixes, such as –by in place names (Moskovich 2004).

1.3.2.6. The Normans

Everybody agrees, as Brinton & Arnovick (2006: 230) point out, “the conquest of England by the Duke of Normandy in 1066 is perhaps the single most important event affecting the linguistic development of English.” And it was also “the last – but the most thoroughgoing – invasion of England by foreigners.” (Millward, 1996: 142)

With the conquest of England by the Normans – French, both culturally and linguistically – the island became “French” both politically and linguistically. For many years, the kings would govern England, but not even put a foot on the island, and of course, could not speak a word in English. Everything was carried out through the French language: the court, administrative documents and even literature written in Britain was in French. “For a long time after the Norman Conquest, French was the language of the governing classes in England. Nevertheless, there was never any period during which the majority of the country’s population did not speak English.” (Pyles & Algeo, 1993: 138) What did change was the way of speaking that English, since it was completely influenced by the French language, with a huge number of French words which would substitute Anglosaxon ones; “by the late fourteenth century, no one could have written an English text of any length without using any loanwords from French” (Millward, 1996: 201)

Little by little, nobles, and their children, were learning English, and with the loss of Normandy in 1204, the Black Death between 1348 and 1351, and the Hundred Years’ War, the presence of the Normans was decreasing, and with them the French language too. “Those whose ancestors were Normans eventually came to think of themselves as English” (Pyles & Algeo, 1993: 138), and the English language was preserved and maintained until today.

1.3.3. Scotland

Since in the list of authors selected for the analysis there are two authors from Scotland, it seems relevant a small study of what happened in this area of Great Britain, in order to see if there is any difference with what happened in the whole country in general, and also because Scotland is a bilingual region. Those languages are English and Scottish Gaelic, a sister language of Irish Gaelic.

1.3.3.1 Prehistoric peoples

As it occurred with Ireland and Great Britain itself, in Scotland there are no testimonies available other than archaeological remains. These people were stoneworkers, and they gradually became farmers, using the land for crops and domestic animals.

Remains from this time can be seen, for example, in Orkney, in ancient monuments and tombs. Thus, we have Maes Howe, a stone built chambered tomb which gets the sun light on the main chamber on the winter solstice; or Skara Brae, an ancient stone-built settlement from 3200BC. Between these two monuments, there is a stone circle similar to Stonehenge, the Ring of Brodgar, which dates back to 2000BC (Richards 1996, 2013).

1.3.3.2. The Celts

The Celts arrived in Scotland through Ireland, with different raids between the first and fifth centuries AD. Naturally, they brought their own language with them. Thus, in the fifth century, Scotland was formed by different small and autonomous kingdoms, emerging four of them as important: the Picts in the north-east (Kingdom of Fortriu), the Gaels in the north-west (Kingdom of Dál Riada or Dál Riata), the Britons in the south-west (Kingdom of Strathclyde), and the Angles in the south-east (Kingdom of Bernicia) (Lawson 2014).

Through the 10th and 11th centuries this situation changed, and the Kingdom of Dál Riada started its expansion, absorbing first the Kingdom of Fortriu, emerging then the Kingdom of Alba, and later the Kingdom of Strathclyde. This new Kingdom of Alba was controlled by a Gaelic-speaking monarchy, so the dominant language was Gaelic. Only an Anglo-Saxon language was spoken in the South-east area, where the Angles remained, although Gaelic was also spoken there, but not dominating. Thus, “until the late eleventh century the trend was towards the linguistic dominance of Scotland by Gaelic” (Aitken, 1984, 2015: 2).

The language spoken at this time was originally the same as Irish, and it continued to be so for some time, but later developed into a different dialect of Gaelic by the 13th century, being called Scots Gaelic or Scottish Gaelic.

1.3.3.3. The Normans

As many authors point out (Aitken 1984, Corbett 1997, Lawson 2010, Ó Baoill 2010), the change and starting of decline of both the Celtic kingdom and the Celtic language was the Norman Conquest. It all started with the marriage of the Scottish king Malcolm III with the princess Margaret. She was part of the deposed English monarchy, and ended in Scotland looking for refuge. Many English refugees followed their governors and settled in Scotland, bringing their own language with them. Besides, since Margaret was English-speaking, her sons were educated in English, not in Scottish Gaelic, and they “led Scotland towards a Norman-French-speaking monarchy” (Ó Baoill, 2010: 11). The third son of Malcolm and Margaret, David I, introduced the feudal system to Scotland, “which drew further waves of northern English speakers to the south of Scotland” (Corbett, 1997: 4) The linguistic dominance of Gaelic had finished, and a new language, Inglis, began to spread.

Gradually this new language expanded across Scotland, mainly to the North, “driving Gaelic to the north and west of Scotland, particularly the Highlands and Islands” (Lawson, 2014: 5). It was also isolated due to the hardening of the division between Highlands and Lowlands, and the consideration of a ‘troublesome’ population (Edwards 2016).

In 1494 the term ‘Scots’⁴ appears for the first time, to name what was originally Inglis, and with it, Gaelic is no longer the language of the Scots. Scots becomes the national language of Scotland, and Gaelic is widely spoken in the North until between the mid-sixteenth century and the late eighteenth century. With the failure of the Jacobite Risings, the Scottish Gaelic is mainly restricted to “the north-west mainland and the Hebridean islands” (Corbett, 1997: 5).

The nineteenth century makes an immense change for these Gaelic speakers with the emigration from the Highlands, mainly to America, provoked by the new impositions of landowners and the failure of industry, but also because of the so-called Disruption, the change to a new church, the Free Church (Macleod 2010).

After all these changes in Scotland, the language used by the vast majority was something between Scots and English, also depending on their level of education and cultural background, and their relation with the rest of Great Britain.

The constant presence of different peoples throughout the years and centuries changed the languages little by little, and different periods, in each language, can be identified, as will be explained in the following section.

1.4. Periodisation of English and Irish

1.4.1. Periodisation of Irish

As part of the English-speaking countries in the world, Ireland has two official languages, Irish and English.⁵ However, the variety of English spoken in Ireland has some characteristic features different from any other variety in the world. As Wells explains (1982: 417), one of the main reasons is that:

⁴ ‘Scots’ is, or has been, considered as a mixture of Old English, Old Norse and French, with borrowings from other languages, such as Gaelic (Corbett 1997, Lawson 2010).

⁵ In article 8 of the Constitution of the Republic of Ireland we can read that “the Irish language as the national language is the first official language”, meanwhile “the English language is recognised as a second official language” (*Bunreacht na h’Éireann*, 6) (Harris, 1991: 37-38) (Constitution of Eire (1937) in Altholz, 2000: 128).

The language situation in Ireland today has been shaped by three principal sources: the English language as introduced from England, and perhaps particularly from the west of England (Anglo-Irish); the Scots dialect, and the Scottish-type accent related to it, introduced into the northern part of the island from Scotland (Scotch-Irish); and the indigenous Irish language itself –also known as Gaelic, Irish Gaelic, and Erse- a member of the Celtic branch of the Indo-European family.

With the introduction of Anglo-Norman in the country, Ireland became a multilingual island, and still is. Usually in multilingual communities, languages play different roles in society, depending on the social status they have: “Es bien sabido que a veces se emplean frases o dichos de la lengua no materna para vulgarizar una situación o expresar un sentimiento jocoso, especialmente si esta lengua es considerada por ese hablante como socialmente inferior.” (Iglesias Rábade, 1992: 41) The island was Irish-speaking, and when these invaders entered in contact with the natives, Hibernophone met Anglophone (Palmer, 2001). The simple fact of existing language contact, implies social consequences, because that contact is a result of social history (Thomason, 2001). Some centuries after the introduction of the English language in the island, it becomes the main language of the island, with the people in power speaking that language, thus acquiring a great social status: when “two languages coexisted, but their use was determined by function and prestige factors.” (Crespo, 2004: 53) From this moment on, anyone wanting to become part of the high society, having a bit of power and influence, or gain respect, should forget anything related to Irish, refusing to use that language, and start speaking English in all areas of life. The stereotype of an Irish person was that of a drunk and savage, with no culture at all; that is why they were deserved of no piety, which included the total negation of the language, as a means of avoiding any kind of power from anyone talking in that language. Those who really were unlearned, believed in this idea spread by the English, and tried to escape from the representation of the Irish as savage people with no culture. As a consequence, they adopted the English language thinking that way they would automatically become “literate” and learned people with power. They achieved power, but only because that was what they were offered in exchange. But those others who were not so easy to

convince and had their own beliefs, remained loyal to their culture and kept on speaking and using Irish in all their daily tasks.

The factors which influenced the final English language derive from different periods and circumstances in the history of the country. In order to be able to follow a clear pattern which leads us to 18th- and 19th-century English in Ireland, we must go back to pre-historic times, and start with the Celtic peoples. They dominated the British Isles in the beginning of the historic times, and are believed to be the first peoples over there because we do not have any direct proof of the existence of any previous language. In order to follow the traces they left, we must rely on archaeology, because we have to take into account that the presence of the Celtic peoples dates back to Pre-history. Typical Celtic elements can be distinguished around the year 800 BC, although the great period of the Celtic peoples in Europe dates back to the 500 BC, and ended with the Roman conquest in the continent, but not in the British Isles. Ireland, due to her geographical isolation, did not suffer so many invasions as the rest of Europe, and that is why the Celtic culture stayed up to the 10th century, when Ireland was invaded by the Nordics⁶ (Keating, 1990).

The Celtic language was divided into two clearly different groups: the Brittonic (Brythonic), sometimes called P-Celtic, and the Gaelic (Goidelic)⁷ or Q-Celtic (Keating, 1990). This classification is based on the different development of sounds ([p] and [k]) in the two branches (Fennell, 2001). And it is from the Q-Celtic, or Goidelic, that the Irish language comes. In its evolution, the branch the Irish language comes from, lost the capacity of pronouncing the initial sound /p/, giving as a consequence words such as *athair* (father) where in Latin was *pater*. Most of the words of that period which started with *p* are foreign.⁸

Four periods are generally assumed in the history of Irish, as can be seen in table 1 below:

⁶ Cf. Keating, 1990: 22; Ó Dochartaigh, 1992: 12.

⁷ “Goidelic, from Old Irish *Goídel* ‘Irishman’, or Gaelic, from *Gael*, the modern form of the same word”. (Greene, 2020)

⁸ And as a curiosity, the patron saint of Ireland, St Patrick, had his name Gaelicised, as *Coithriche* (Purdon, 1999).

Periods in the Irish language	
OGAM	5 th century- 7 th century
OLD IRISH ⁹	7 th century- AD 900
MIDDLE IRISH	AD 900- AD 1200-1250
EARLY MODERN IRISH	AD c 1200-1650
MODERN IRISH	1650- present day

Table 1: Periods in the Irish language

Many specialists (Breatnach 1994, Ó Dochartaigh 1992) consider that Old Irish appeared in the 7th century, after the Ogam inscriptions starting in the 5th century, and it disappeared around AD 900; the same happened with Middle Irish in AD 1200-1250. Later on, from AD c 1200 to 1650 we have Early Modern Irish, and after it, Modern Irish from around the mid-seventeenth century to the present. These divisions correspond to important events in the history of the island. Thus, the adaptation of Latin through Christianity in Ireland in the seventh century provokes the beginning of the Old Irish period, which is also marked by the new literacy, and the completely adoption of the Latin alphabet, already introduced during the Ogam period (Doyle 2015). The start of Middle Irish coincides with the appearance of Norse settlements; and it is because of the new forms of monasticism and the first Anglo-Norman settlements that Early Modern Irish begins. Finally, Modern Irish is characterised by the presence of individual dialects of the Irish language (Ó Dochartaigh, 1992, 2000).

According to Harris (1991), the first time the English language appeared in Ireland was in the 12th century, with the Anglo-Norman invasions, and it was not until several centuries later that it started fighting with the Irish language spoken by the native inhabitants of the island. This change in the situation of the peaceful coexistence of the natives and the foreign languages was promoted by “the plantation schemes of the 17th century, under which thousands of English and Scottish settlers arrived in Ireland” (Harris, 1991: 37). According to Trudgill & Hannah (1994), the English language that was first spoken in Dublin, and around it, was introduced in Ireland from the west and west Midlands of England, and then it has spread covering most of what is today the Republic of Ireland. Signs of where it came from can be found in the present-day English spoken in Ireland.

⁹ According to Ó Baoill (2010), it is wrong to call this language *Irish* but *Gaelic*. Therefore, the different periods should be *Old Gaelic*, *Middle Gaelic*, and so on and so forth.

This circumstance was the basis for the position acquired by the language largely spoken in Ireland nowadays: English. We must take into account that around 1800 English was used as their first language by half of the population. However, by the year 1600 it was pushed into a small redoubt on the east coast (Harris, 1991).

Neither of the two languages of Ireland, English and Irish, has been able to make the other vanish. Both coexist and share daily life. Despite the fact that English is used by the vast majority of the inhabitants of the island, they have not forgotten their own Irish language. However, as Thomason (2001: 5) explains, “in many cases the language of a minority culture is used as a marker of cultural differentness: not only does it provide a means of identifying the people to be discriminated against, but it also offers a target for discrimination.” Hard as it may sound, this is true, and it is also one of the reasons why the number of Irish speakers is gradually decreasing. The feeling of being discriminated by means of the language chosen to communicate, leads many languages in the world to die out, when the opposite should be rewarded. When the use and learning of Irish was forbidden in Ireland by the English crown, the speakers of Irish learned English to communicate with those in power, but they did not lose their own identity; what is more, they had the capacity to learn a new language, increasing their knowledge and culture. What that shows is that as long as they spoke English, they were not discriminated, but when they showed their competence in Irish, the discrimination was present. Those using Irish were punished, and the ones using English were rewarded, usually with some power. This way, the more people using English, the more power they would have, but although they continued being Irish, the power they were given was used as blackmail by the English crown to gain their loyalty.

The rules for the English language used in Ireland are those from British English, although Irish speak in a different way, not always using the standard British norms. In other words; “the functional link between institutionalised forms of English and the spoken vernacular varieties which have developed in Ireland has remained unbroken since the 17th century. The result is that there exists no fully independent Irish English vernacular.” (Harris, 1991: 39). And it is for this reason that an established and external set of norms which could define a standard Irish English accent does not exist.

It was with this language that the great Irish authors of the 20th century expressed themselves in their works, where “the language has an essentially Irish character though modified and eked out by English” (Kirk, 1985: 157). These authors wanted to reflect Irish life and people, but using the English language, not because they did not like their

own language — some of them were able to speak and communicate in fluent Irish —, but because most of them lived in England, where everybody used English, and therefore that language was the appropriate vehicle to transmit their culture to those around them.

Thus, according to Fennell (2001), there are three main varieties. The first one is rural Hiberno-English, which is the most conservative and gaelicised variety, and which is spoken in the countryside and also in the West. Another variety would be the urban Hiberno-English, which is more mixed in character due to the contact with the outsiders, but which preserves some original Anglo-Norman features in the big cities. The last one is divided into two different types, the educated Hiberno-English, more influenced by Standard English but with rural characteristics, and the modern educated Hiberno-English, which is influenced by the media and by Dublin-educated teachers and other members of the community.

1.4.2. Periodisation of English

We have seen when dealing with Ireland that the factors which influenced the final English language derive from different periods and circumstances in the history of the country. In order to be able to follow a clear pattern which leads us to 18th- and 19th-century English in Britain, we must go back to earlier times. In Ireland we needed to go back to the Celtic peoples because they were those who brought into the island one of the official languages of the country nowadays. But in Britain the Celtic language was lost with the arrival of the Anglo-Saxons; that is why we only need to go back as far as the fifth century.

The Germanic tribes (Angles, Saxons and Jutes) introduced in Britain a new language, which would be called Anglo-Saxon. This was a Germanic language from which English is derived, although with several influences from other languages, as we will see later on.

Five periods are generally assumed in the history of English, as can be seen in table 2 below:

Periods in the English language	
OLD ENGLISH	450-1100
MIDDLE ENGLISH	1066-1500
EARLY MODERN ENGLISH	1500-1700
LATE MODERN ENGLISH	1700-1900
PRESENT-DAY ENGLISH	1900- present day

Table 2: Periods in the English language

It is considered that Old English starts around the year 450, although there are no written records until the eighth century. The beginning of a period is usually marked by a significant event in history, and in this case that event was the arrival in England of Germanic tribes from continental Europe. This period would finish around the year 1100 – to give a round figure – when the next one starts. The beginning of Middle English is characterised by the conquest of England by the Normans in 1066. This is the period when the French language inundated the English language with its vocabulary, a massive intake of Norman-French vocabulary items (see Crespo 2013, Lutz 2017, Skaffari 2009), and the end is marked with the introduction of the printing press in England. This is the beginning of the next period – Early Modern English. The printing press was introduced in 1476, beginning this period around 1500, and ending approximately in 1700. A standard dialect begins to emerge during this period.

In 1700 we change again to a new period, Late Modern English, which finishes around 1900, when the last period, Present-Day English starts. These two last divisions are not agreed by everybody, since, as Brinton & Amovick (2006: 10) point out, “many scholars speak simply of Modern English (ModE, 1700 to the present), which incorporates both Late Modern English and Present-day English”. I will assume the division between Late Modern English and Present-Day English, since that division suits the range of years of the texts selected in my corpus.

1.4.3. Periodisation of Scottish¹⁰

As stated in Section 2, the Scottish Gaelic language spoken in Scotland for centuries lost its position of power around the 14th century, leaving space to the new language, Scots. The condition of this ‘new language’ is something unclear: scholars still debate on its consideration as a dialect of English or not, since “a number of institutions recognise Scots as a separate language, cognate with English” (Lawson, 2014: 3). Besides, there are many varieties of Scots spoken in Scotland, including rural Scots, urban Scots, or insular Scots (Corbett 1997).

Looking at this, instead of a periodisation of a single language, we will need two (Scottish Gaelic and Scots), being more a periodisation of Scotland, rather than a language.

In the first case we have the Gaelic language¹¹. In Scotland the language arrived from Ireland around the year 800, and until the thirteenth century it remained the same. So the different periods of the language correspond with the different periods of the language in Ireland, although in Scotland that division is not really taken into account. From the thirteenth century on, the language was simply Gaelic, or Scottish Gaelic, with no division into periods.

When the Gaelic language loses its power in Scotland, a new one appears, Scots.

Periods in the Scottish language, Scots			
OLDER SCOTS	1100-1700	PRE-LITERARY SCOTS	1100-1350
		EARLY SCOTS	1350-1450
		EARLY MIDDLE SCOTS	1450-1550
		LATE MIDDLE SCOTS	1550-1700
EARLY MODERN SCOTS		1700-1845	
MIDDLE MODERN SCOTS		1845-1925	
CONTEMPORARY SCOTS		1925-present day	

Table 3: Periods in the Scottish language, Scots

¹⁰ The two subsections above deal with a specific language each (Irish and English). In this case, it is necessary to focus on two languages, rather than in only one, and that is why the word ‘Scottish’ appears in the title instead of the name of a language.

¹¹ The term Gaelic is used in Scotland as well as in Ireland, since for centuries they were the same language. In Scotland it is also called Scottish Gaelic, although this language variation became separate from the Irish one from the 13th century on.

Taking into account the dates of production and creation of the works to be analysed, special attention should be paid to the eighteenth, nineteenth, and beginning of the twentieth centuries. On the one hand, following Corbett (1997: 7), in the seventeenth and eighteenth centuries in Scotland, “Scots as well as Gaelic became widely associated with the vulgar, the barbaric, the parochial”. On the other hand, in the eighteenth century, in many parts of Scotland, there was no distinction between Scots and English, they were considered as synonyms, and there was even a hybrid Scots-English, which was considered as an Educated Scottish Standard English (cf. Corbett 1997, Aitken 2015). With this in mind, it is very likely that the Scottish authors I have included in my corpus (see Section 4.2.1 below) had learned and used English and not any other language.

Nowadays none of the two languages have disappeared, and Gaelic is still written and spoken every day in the Northwest and the islands, with a recent revival and presence in the radio and even on films and television programmes.

1.5. Some traces of other languages

1.5.1. Ireland

What is most interesting in the English spoken in Ireland is to see the degree of influence of all the languages it has been in contact with, such as Celtic, or its descendent, Irish. This can be observed through the presence of features from those other languages, whether in the vocabulary, in grammar or in pronunciation. I will be focusing on vocabulary in the present work.

First of all, we must take into account that the presence of signs from languages that once existed in Ireland are not exclusively of Irish English, because some have passed into British English through the contagion made on those people who travelled to the island to impose their language, among other things, and then they went back home. “Some terms found in the oldest stratum of recorded Irish have passed into Anglo-Irish and English generally.” (Henry, 1985: 158).

There is also another point to bear in mind, that is, the fact that some characteristics in English first attributed to Irish, are now presumably believed to belong to archaic English. The problem is found in the way that experts are not sure whether these features remained in the English language throughout the years, or if it is due to the influence of Irish, which assumed them as her own. Trudgill & Hannah (1994: 107) tell us that “in some cases lexical forms not found in other varieties are due to borrowing from Irish, while in other cases they may be due to preservation of archaic forms.”

On some occasions the words are identical in Irish and British English, but the meaning is slightly different, such is the case of *evening*, meaning ‘afternoon and evening’ in Ireland, or *up above*, as a directional term, meaning ‘southwards, in the South’ in Ireland, as well (Trudgill & Hannah, 1994).

Many are the fields in the English language where we can see some lexical items originally belonging to the Irish language. It is more frequent to find examples in speech in everyday conversation, because, as Harris explains, “the written model is more or less indistinguishable from that of standard British English.” (1991: 39). However, some traits of Irish influence still persist in written language and there are some vocabulary items, generally taken from Irish, which make reference to local customs and institutions (Harris, 1991). Thus, words such as *taoiseach*, which means ‘prime minister’, or *dáil*, which is the ‘parliament’, are present in the English of Ireland. Despite the existence of words like these, they are not enough to warrant an own language of an autonomous local written standard, and although “spoken English tends to follow the norms of the written standard in matters of grammar and lexis”, many are the exceptions, such as the case of *dáil* or *taoiseach*; these two cases, particularly, because they make reference to national institutions which are named after their equivalent Irish words (Harris, 1991)

“As is often the case in language contact situations, the social relationship between indigenous groups and new settlers determines not only the extent of lexical borrowing, but also the semantic fields to which each contributes” (Corrigan, 2010: 90). Thus, there are also words belonging to fields like surnames, which have a common past with Scotland, because their introduction in Ireland, and in the Irish language, was due to the “important movement of Scottish mercenaries to Ireland between the thirteenth and the seventeenth centuries” (Henry, 1985: 158). In this sense, the origin of

these words is a Celtic one, since Irish and Scottish were both Celtic languages, Goidelic, to be more exact. From this period we find in Irish English Gallogly and Gologly from mac Gallóglaich, which meant ‘son of the foreign soldier’ (gall-óglach); or Gallagher from Ó Gallchobhair, meaning ‘descendant of foreign aid’ (gall-chobhair) (Henry, 1985).

As there is more than one variety of English in Ireland, there are also words which are spread throughout the country, and some others which are characteristic of a certain region in the island. In relation to this, we can see the existence of many Celtic place names, such as cities, towns, valleys or rivers. Examples are Dublin, from a compound of dubh “black” and linne “lake, bay”, originally meaning “lake of the black bay”, or “black pool”, due to the black colour of the beaches when low tide. However, the name now used for Dublin in Irish — Baile Átha Cliath — derives from a more ancient period. It means “the town of the hurdle-ford” (the ford of the Liffey was located within a kilometre of the “Black Pool”) (O’Donnell & de Fréine, 1994: 80). Another city with Celtic origin is Galway, from *gal* (in Old Irish “courage”) or *gall* (in Old Irish “foreign”), and way, of Anglosaxon origin. The term Kill-, in many names of towns (Killarney, Killough) comes from the Celtic word cill “church”, meaning the compound noun “church of ...”. Or even the Aran Islands, arán meaning “bread”; or the river Bann, from Old Irish ban “white” (Sainero, 2003).

1.5.2. Great Britain

As we have said earlier, the English language spoken nowadays in Britain has many influences from other languages, something which has been happened little by little with the different conquests and invasions, and the language contact which occurred among them. In the same way we have done with the English language in Ireland, where we focused on the vocabulary, we are now going to observe the presence of features from those other languages in present-day English in Britain.

We have already seen that Latin was one of those languages which influenced English, and loanwords were introduced from Latin into English mainly through a very simple channel, Christianization, because Latin was the language of the Church. Many

words entered this way, “the English, however, were also resourceful in adapting existing native words to express Christian concepts.” (Millward, 2006: 117)

And it was through Latin that some Greek words entered English. But not only through Latin did Greek words appear in the English language. According to Pyles & Algeo (1993: 297), some other Greek words came into Germanic directly from Greek, and in that way they are present in English. This is the case of the word *church*.

If the English language replaced the Celtic one spoken in Britain, it is logical to think that there are traces of this language in English. Many of the words which the Celts introduced into the English language during the conquest were Latin words. The Celtic words present in the English language are the consequence of a more recent influence, that of the Irish Gaelic in the seventeenth century.

Scandinavian traces in the English language are very difficult to observe due to the similitude of languages – we must remember they all descend from the same branch – and furthermore, “Late Old English and early Middle English loans from Scandinavian were made to conform wholly or in part with the English sound and inflectional system.” (Pyles & Algeo, 1993: 299) However, there are still some traces of this language in English, as shown in Section 1.3.2.5. above.

Of course, the main influence has been from Norman-French. Thus, many words dealing with government or administration are not surprisingly of French origin.

But there are also some other languages which have entered the English language as we travel in time, and in this way, Romance languages have found a place in English. Spanish and Portuguese loanwords appear in English from the fifteenth century on – not mentioning those from Spanish which were introduced in the nineteenth century in American English and later brought to Europe. And also Italian found a place a bit later, with a big contribution to the musical terminology.

Once the commercial relationships with other countries were established, words from other languages started entering the English language in the Middle Ages. This is what happened with loanwords from Dutch and other forms of Low German, such as *shore* or *mud* (Malášková, 2011: 26-28).

So far I have been introducing the sociohistorical contextualisation of the languages involved as the authors included in the analysis, from English, Irish and Scottish origin. The brief and condensed outline of the history of these languages,

Language contact in Ireland and Great Britain

mainly the Irish and the English situation makes reference to the need to set up some basic tenets around these languages in order to further explore whether situations of language contact and language and power could help explain the results of the analysis that will be carried out in Chapter 5 below.

Once the history of the countries has been presented, the next step consists in approaching in some detail the period of time which is relevant for the analysis as well as the diatopic variety of English I will be working with: scientific English during the Late Modern period.

CHAPTER 2. LATE MODERN
ENGLISH AND THE SCIENTIFIC
DISCOURSE

2.1. Introduction

In the pages that follow, I will offer an outline of the linguistic situation of Ireland and Great Britain over time. First I will start with the early times up to the eighteenth century, to continue with the eighteenth century itself, and the nineteenth century. There will be also a description and brief discussion about what the scientific discourse is, and why it is relevant for the analysis of the texts selected in the corpus.

2.2. Before Late Modern English

The period of interest for this study comprises the 18th, 19th, and beginning of the 20th century. In order to understand the linguistic situation in the two countries, I will take a brief look at the previous centuries. Although the history of the two countries has already been tackled in Chapter 1, nothing about the written language has been mentioned.

The Ogam runes found in the Irish cultures are the first signs of written language in the country. However, the first record of a text dates back to the year 913, when 16

poems were published in the English of the time, something between Latin and Old French (Hickey, 2002, 2004). They are known as the “Kildare Poems”.

Not much later, in the 14th century we also have some testimonies of the English used in Ireland. First, the poem “The Pride of Life” appeared in an account book of Holy Trinity Chapel in Dublin. The manuscript of the poem was prepared around 1340. And from 1365 is the second text, “Acts and Statues of the City of Waterford” (Hickey, 2002: 25). Up to the 16th century, the language represented in the written texts is just what the writers considered they were speaking; but at the end of the same century, “attestations of Irish English begin to appear which are deliberate representations of the variety of the time” (Hickey, 2004: 27).

In what refers to the social and scientific history, Great Britain was completely involved in the scientific revolution in the 16th and 17th centuries; while Ireland was suffering the English conquest (Attis, 2004: 52). It was in the 17th century when the imposition of a new class of English Anglican landowners established throughout the country and the English language was completely established in the island. (Murphy 2003).

All this was complete with a slow increase in the production of grammars of the English language (Tieken-Boon van Ostade 2008).

2.3. Eighteenth-century English

First of all, I would like to pinpoint that I agree with those that support the inclusion of the centuries we are dealing with, 18th and 19th, in the Late Modern English period (Poutsma 1926, Tieken-Boon van Ostade 2009). As is logical, this period drinks in the sources of the previous period, and in its structure, the language has not changed too much from one to the other, as we will see.

Obviously, the language has evolved from the Old English period on, although a native speaker does not notice any evolution. However, when a foreigner appears speaking English, the influences the mother tongue of this speaker may have over the language will sound strange to a native, and that shows how the English language can vary. “By the sixteenth century, we find attempts, often stereotyped, to represent the

imperfect speech of foreigners, including speakers of the Celtic dialects in Britain.” (Millward, 2012: 249-250)

It has been due, in part, to this existence of different varieties of the English language, that several attempts to create a national academy of the language — as it exists in languages such as Spanish, French or Italian — have followed each other, but unfortunately none has been successful.

Another aspect in the English language of this period is the absence of a set of established rules for the spelling of words. According to Algeo (2010), in the 15th century the English language experienced a great change in pronunciation and spelling. However, as Millward (2012: 303) points out, “in Great Britain, interest in spelling reform died down after the sixteenth century but revived during the mid-nineteenth century” (Millward, 2012:303).

An important aspect of a language is the presence and acquisition of loanwords from other languages. English is not an exception, and that is why during this period, the number of loans continues increasing. Why does a language need to incorporate new words taken from other languages to its own? The English language was quite important in the world, however, “its suitability as a scholarly language was still in doubt in the seventeenth century.” (Millward; 1996: 227) The main language English had taken words from in the previous period had been Latin, and the same situation is found in the 18th and 19th centuries. Latin is still the language dominating Europe, and the language considered to be used when dealing with culture. Thus, words were taken from Latin and introduced into English, on the one hand to add importance and prestige, and on the other hand because that was the way in which the new words would be perfectly understood, due to the fact that they were already known for the group of people who would use them.

Nevertheless, the main difference between the borrowing of words in this period and in the previous one is that now loans come also from other vernacular languages, not only from Latin. In this sense, French is, after Latin — and Greek to a lesser extent — the language preferred for the English language to take words from, and to incorporate them as their own. But also languages from which English had previously borrowed words continue to be present. Thus, Celtic loans are still important in the English language, with examples such as *blarney*, *dolmen* or *slew*.

The eighteenth century is probably the beginning of a new era for the English language, in what to its study and cult concerns. For Wischer (2007: 152), this century “can be described as the ‘age of rule’.” Authors, such as Bailey (2007), Tieken-Boon van Ostade (2008) or Wischer (2007) herself point out that in the eighteenth century grammars and dictionaries of the English language were published very frequently. And during the second half of the century, also the syntax section included in these grammar manuals grew substantially. It is important to remark that” in the course of the century English gained more speakers itself more widely than any of the other languages of Europe” (Bailey, 2010: 184).

We must bear in mind that “contemporary spelling is the heir of thirteen centuries of English writing in the Latin alphabet” (Pyles & Algeo, 1993: 63), and any change produced within it, or in the structure or vocabulary was only accepted if they were shown in these grammars, since, following Tieken-Boon van Ostade’s words (2009: 89), “it is usually assumed that normative grammars had an enormous influence on the language.”

Nevertheless, it should be taken into account that grammarians from this century were not language experts, they were not linguists, but clergymen, schoolmasters or booksellers (Chapman, 2008); as well as some of those writing about mathematics were not university professors, with high knowledge on the field, but instrument makers or private mathematical tutors (Attis 2004). It was not until the next century, 1830s, that the word “scientist” was coined. (Fara 2004) As Crespo (2012a: 21) points out, “Whewell is given credit for coining the word scientist in 1834”.

From 1660 on there was a great expansion of print culture in Great Britain and in Ireland. The latter saw a growth of books on Irish history, due to the fact that printers chose the larger towns in Ireland to establish themselves, and, print gradually entered Irish life (Barnard 2006, Cunningham 2006). Until the 18th century there was little scientific publishing in Ireland, mainly in the Philosophical Transactions of the Royal Society. But in 1731 the Dublin Society was founded, and the Royal Irish Academy in 1785, what provoked an explosion of publishing in all scientific sectors, and made Irish science flourish (Fitzpatrick 2006, Herris Davies 2004).

Science became an important part of social life in this century in both countries, and thus “it became more common for intellectual women to gather together in discussion groups, such as the blue stocking in London” (Fara, 2004: 15). There were

very few the women who had their names written down on books, it was mainly men, although they were behind most of the work. All the academic subjects were symbolised by women, such as mathematics, history or astronomy, but it was men who studied them (Fara, 2004: 5).

The 18th century in Ireland is also the century when the decline of the Irish language started, although there is little statistical documentation of it (Hickey 2010). One of the reasons might be the fact that the education in this century was more about what the authority (the English) considered necessary to censor, anything rude or provincial, and not simply teaching what was correct (Hickey, 2010: 266).

The end of a century might imply many different things in several aspects. However, language may not always be one, moreover, if we are talking of the first years of the next century. Languages do not follow our calendar, and that is why it is frequent to find changes taking place at a different pace.

2.4. Nineteenth-century English

In the change of the century, in most cities and towns in Ireland both Irish and English were found, although the language of power and dominance was English (de Fréine 1977). Because of the fast change of languages, a great amount of new words or forms appeared in the English of Ireland, in some cases with the attachment of Irish morphemes to English words (Corrigan 2010, Gramley 2012). Examples of this could be suffixes included in the diminutive system of Irish English, such as *adán* <-adan> or *ín* <-in / -een>, “which have created (i) *snipp+adan*, a ‘small, cheeky person’, on the root of the obsolete Standard English sense of ‘snip’ as ‘snub’; (ii) *skilly+een*, ‘a small skillet’” Corrigan (2010: 91).

Centuries change in an exact date, but people’s minds do not. That is why “grammar writing in the first half of the nineteenth century was not dissimilar to eighteenth-century style.” (Wischer, 2007: 168) The previous century had been a revolution for the field of language, and people still trusted the existing manuals. Every area of study has a period, “whereas grammar writing in the eighteenth century has received much scholarly attention, nineteenth-century English grammars have not attracted the same interest.” (Wischer, 2007: 152)

This century began with the political union of Ireland and Great Britain in 1801, what changed the relative independence Dublin had had in the previous century as the capital of Ireland (Hickey 2002). This union did not provoke an immediate linguistic change in Ireland, although “Irish was well on its way to becoming a minority language” (Coleman, 2003: 178). It was the Great Famine in the late 1840’s which changed the pattern, but not because” people decided to change their language, but the loss of population led to a decrease in the number of Irish speakers.

However, at the end of the century there was a revival of the Irish language, “the society for the Preservation of the Irish Language was founded in 1898 and in 1880 the breakaway Gaelic Union” (Murphy, 2003: 47) It did not achieve the same importance as it had had, but at least, the Irish language did not disappear.

Dealing with science, and as Harris Davis (2004) explains, with the beginning of the new century and all the political and social events which had happened (the Act of Union) Ireland suffered a stop in scientific production. By contrast, the first half of the century saw an enormous boom of people studying at Trinity College (McDowell 1957). As the years passed by, well into the 19th century, although scientists were not working in laboratories or research institutions, science was back alive, this time in private homes, normally in wealthy families. This fact favoured the inclusion of women, since they were excluded from universities (Fara 2004, Crespo & Moskowich 2020).

The beginning of the twentieth century, the only relevant part for the analysis, follows the trends of the previous century. Besides, the authors selected for the analysis with production in the twentieth century were all born in the eighteenth century, and actually, they all were over 23 years old when the new century began, so their language was already well-established on themselves.

As it was explained at the beginning of this chapter, apart from the linguistic situation in the two countries in Late Modern English, this chapter also includes a brief discussion about scientific discourse. In the following section I will deal with this topic and its relevance for the present study.

2.5. Scientific discourse

When facing a text for the first time (leaving literature aside), our knowledge of it will probably be only based on its title. That could help in some cases, but not always. We could read it and decide the discipline it belongs to according to the subject it deals with; however, we have to be very careful with the date of the text, since subjects will belong to different disciplines depending on the century they were written. And another factor to bear in mind is the audience of that text, which will make the text different if it is addressed to children or to adults, in this case probably containing more abstract ideas and “scientific” terminology.

It is here where it seems in order to introduce a concept which will be tackled later in more detail, the term *register*. When people dealing with science started to communicate abstract ideas with a vocabulary and terminology which had to be created on purpose, a new register in language emerged, that of *scientific writing*. The audience of this new register had to be included in the same circle of knowledge, otherwise the purpose of the written text would not be fulfilled. Nevertheless, the fields of science in the centuries selected for this study were so wide that the language and terminology included in this new register was also quite extensive.

As we will see in Chapter 4, those people writing about science had some similar characteristics, which allowed them to understand texts of different fields with relatively easiness, and therefore we can say they owned a knowledge in what we will call *scientific language*. “Scientific texts are found to be difficult to read; and this is said to be because they are written in “scientific language”, a “jargon” which has the effect of making the learner feel excluded and alienated from the subject-matter.” (Halliday 2004: 159)

The term *scientific language* is somewhat problematic in its definition, because there is not such a scientific language on its own; there are many different scientific languages depending on the branch of science we are dealing with. In the same way language is complex, science is as well, and as Gutiérrez Rodilla (1998:16) points out, “en cada una de sus ramas, se dan diferentes características y son cambiantes los recursos comunicativos.” This is logical, if we think that we do not expect exactly the same vocabulary, structures, or expressions in a text dealing with botanics, mathematics, or philosophy. However, all of them are scientific texts, and they are all written in what we denominate *scientific language*. Within this label we can find all the

different sublanguages used in the multiple branches of science, each one with its own characteristics, but with a common denominator.

Since this study will only deal with written texts, the term *scientific writing* could better be used here, with the same meaning of *scientific language*, but the restriction of being a language only present in its written form (no intonation, accents or gestures will form part of it).

This *scientific writing* constitutes part of the *scientific discourse*, which is “the product of the scientist’s adaptation to the requirements and his own way of structuring the professional scientific activities” (López Orellana 2012: 84). This discourse is based on the assumption of the existence of a writer (in scientific writing) and a reader. In some cases the author explicitly says who he or she is addressing, but in other cases there is no such information, however, as López Orellana (2012) states, every writer has in mind a target audience, so that makes communication easier. Scientific discourse has not been treated the same during all periods of time, and as Pahta and Taavitsainen (2009: 551) point out, “the notion of science is different in different periods”. There have been times when science was considered as something not really important, and some other periods when the relevance science acquired was enormous, and when almost everything was related to it. In the 19th century, science was so important that every aspect of life was observed through science, and only that perception of life was considered as the real one: “The Royal Institution was a centre of science, and the idea was that Discourses there would be scientific: when literature or religion or painting was under discussion, it would be from some scientific point of view.” (Knight 1986: 138)

Following Banks (2008), we should also bear in mind the term *science*. If the term *scientific language*, or *scientific discourse*, poses problems when defining it, as seen above, it is because of the meaning *science* had in itself. In the fourteenth century, the concept of *science* was parallel to that of *knowledge*, something derived from the 4th century B.C. with Aristotle (Singer 1941; Sedgwick and Tyler 1917). It is the concept of science what Aristotle changed, not science in itself; Thales is considered the father of science (Singer 1941), not because he created science, but because he was the one bringing it to the Greeks – from the Phoenicians and Egyptians - and with them to the whole world.

The following centuries, 15th and 16th kept the same notion and concepts, and science did not change its meaning or vision. But everything would change in the seventeenth century, when the ancient explanation of the universe started to break down (Butterfield 1959) and led to a scientific revolution. Following it, the word *science* becomes to be used in a more restricted sense, which will keep on changing until the end of the nineteenth century, moment in which it acquires its contemporary meaning (Banks 2008).

From the scientific revolution on, people dealing with science – they were not called scientists yet but natural philosophers– would look at every aspect of life through the eyes of science, and therefore, almost everything they could speak or write about belonged to some kind of discipline within science. The divisions of fields of study were not so defined, which means that disciplines considered different nowadays were one and the same, as well as topics which would not be considered scientific were so at that time. “Science itself is a fragmented activity: technology is not simple applied physics and chemistry, and between the various sciences there are frontiers which are not easy to cross.” (Knight 1986: 1). For example, alchemy and chemistry were so strongly interrelated that they were considered as only one discipline, scientists moved between the two of them without noticing any change. (Coyne, G. L. 2012)

If authors of that time considered science and knowledge as being quite similar, it seems reasonable that they wanted to tell the world (or somebody specifically) what they had learned or discovered. Language has always been the means of communication and interaction, and that is why these “scientists” would write their thoughts or discoveries so that others could know them, agree or disagree with them. As Reguant (2003: 94) says, “la comunicación primera o primaria de la ciencia es aquella que constituye el conocimiento adquirido por un científico como ciencia”.

Once the scientist knows something exists, he has to transmit it to the world. The way this is done is through articles or books where the scientific language is employed. “Language is the instrument of knowledge; all our knowledge has a verbal form and a science can be reduced to a system of propositions. But at the same time language is the means of human communication *par excellence*.” (Siguan 2001: 60) In the same way national languages evolve and change from time to time, all kind of languages do. Thus, scientific language has also changed, alongside the change in English, in this case, but also within itself. And the different periods of time have also

helped this change; thus, in the Enlightenment, “people spoke and wrote differently from the way in which they had spoken and written hitherto, and they would go on speaking and writing like that for some time to come.” (Im Hof 1994: 8) Nevertheless, contrary to what it might seem, this continuous change in language is not completely bad. People of that time were influenced by scientific thinking, and their way of writing was changing, in part, due to the need of accommodation to science, and that is the positive part, since, following Kaplan (2001: 14)’s words, “science is an important candidate for promoting the growth of a Standard language because it uses a common set of methods and measurement-standards and is cumulative and self-referential.” And as we have seen, English in the eighteenth century went through a total revival in the interest of the language itself, with the creation of grammars and dictionaries, looking for that Standard language.

Different times require different expressions and vocabulary, and this goes linked to the diverse interests people have, which change depending on multiple factors. In this way, Gutiérrez Rodilla (2003b: 456) tells us that “mucho más nuevo y más escaso es el interés demostrado hacia la lexicografía científica a partir del siglo XVI”. However, it is necessary to remember the fact that from the eighteenth century on loanwords from other vernacular languages started to appear in English, probably due, in part, to that need of new vocabulary in science.

The Scientific Revolution which took place in the seventeenth century was the factor which most influence exerted on Enlightenment thinkers. They became fascinated by science, and went back in time to grab the essence of their thoughts; “it was the Enlightenment’s *philosophers* who took up the science of the preceding age and helped to establish it as the dominant force in Western culture.” (Henry 2004: 10)

But the concept of science people had during the Scientific Revolution, and even by the early 1700s, was slightly different; for them the concept was related to natural philosophy, and that is why the philosophers were the ones who were closer to science. They tried to show everybody science was interesting, but it took them more time than what they initially could have thought that the new doctrines would be completely accepted in the new era, and “it was not until well into the eighteenth century, which makes a European ‘scientific revolution’ a thing of the Enlightenment.” (French 2003: 222)

During the eighteenth century the new scientific ideas spread around the Western world; however, there were very few the institutions which were specialised on scientific issues. The Enlightenment helped these ideas to be known and studied, but it was not until “about 1830 that scientific communities began to take meaningful shape and to function on a national and international scale.” (Cahan 2003b: 11) Actually, it is during the nineteenth century that all the previous scientific knowledge and ideas are brought to a successful conclusion, and are applied to real situations, in part due to the fact that “the nineteenth century witnessed the rise of modern industry.” (Wengenroth 2003: 221)

As an example, we can take a look at the Royal Society of London. It started in 1660 as a forum to discuss ideas related to science, with formal meetings held since its creation. The seventeenth and eighteenth century dealt with that “science based substantially on genteel norms of social conduct” (Atkinson, 1998: xxii), and the criteria to be a member remained the same since its foundation. However, in the second half of the nineteenth century everything changed, and “scientific standing and activity” became “the main criterion for membership, with publication of scientific papers being an important indicator of such activity.” (Atkinson, 1998: xxii)

It is very likely that the appearance of scientific writing in vernacular languages, from the late seventeenth century onwards, had played a major role in the scientific revolution and in the change of mentality of scientists, and in the science itself, as it had occurred when changing from Greek to Latin in the Middle Ages, from Latin into Latin and vernacular in the early modern period, and even when in the twentieth century there was a gradual and increasing changing to English only (Pahta and Taavitsainen 2009).

Scientific discourse is characterised by different features that make it recognisable. Following Wei and Yu (2019), the first characteristic of scientific discourse is the fact that the language used in this type of discourse is very formal, and many types of writings are included under this name (scientific papers, procedures of experiments, experimental reports, etc.). All these types of scientific writings share the clarity of expression, and facts are exposed through a strict coherence and objective description. The text structure in these texts follows a clear pattern which is not normally changed, following always the same language style, a specialised language, with certain technical lexical items according to the issue treated.

Scientific discourse is normally considered to be impersonal, and that is why the “use of the passive voice is probably one of the most frequently cited characteristics of scientific writing” (Banks, 2008: 25). In order to see if this phenomenon has a powerful reason to be, the next aspect to be considered is the passive voice, with its different forms and structures.

Once the subject of this dissertation has been sociohistorically contextualised, and since it has been explained the register to be treated, the scientific one, it is now time to introduce the next aspect. Next chapter deals with the linguistic aspect to be analysed, the passive voice. The reason to choose this subject is because it is a linguistic aspect very different between the two languages, Irish and English. Since the difference is that notorious, as it will be explained in the following chapter, a possible interference between languages would be easier to detect and analyse.

CHAPTER 3. THE PASSIVE VOICE

3.1. Introduction

Once the geographical area and the different texts to be considered have been defined, it is time to focus on the grammatical aspect of this work, the passive voice. The reason to choose this grammatical aspect may lie in the statement made by Banks (1990: 336), to prove it right in any field and geographical area: “It is commonplace that scientific writing contains a high proportion of passive sentences, and it is generally accepted that the majority of these contain no prepositional phrase with by.”

Since the works selected for analysis are scientific texts, and according to the previous quotation by Banks, the passive voice is thought to be present in these texts, this feature will be used as the tool to make grammatical comparisons within the corpus. Therefore, understanding the main aspects of the passive voice will be the starting point for the later analysis.

This chapter is divided into six sections. The first one deals with the structure, formation and different types of passives, and it is followed by that dealing with the possible restrictions the passive voice has. The next section focuses on the auxiliary verb used to form the passive voice, and the pragmatic interpretation of the passive

The passive voice

voice follows it. The last two sections are centred in the passive voice of the Celtic languages of relevance here, Irish and Scottish.

3.2. Structure of the passive voice

In this section we are going to see what is considered to be a passive construction, how it is formed and how authors classify the different passives.

The term *passive* is mainly associated with what is known as personal passive, although there are also impersonal passives, as we will see later in the following pages. Constructions under this name (passive) have the following characteristics:

- a) They contain a subject with a semantic meaning;
- b) they have a corresponding active construction, and
- c) the subject of the passive corresponds with the patient of the active.

Siewierska (1984) affirms that the term *passive* has been used to name several constructions in different languages. She also presents the most commonly accepted definition of passive accompanied by the following characteristics:

- a) the subject of the passive sentence is the direct object in the corresponding active sentence,
- b) the subject of the active sentence becomes the agent in the passive sentence,
- c) the verb is in the passive voice.

Personal passives whose subject corresponds with the patient of the active, form the most common type of passives. In fact, there are languages in the world which only have this kind of passives. Generally, this type of construction has no agent. However, when a passive without agent is isolated, we might find it ambiguous, as seen on example (1), something that does not happen in the active.

(1) Janet was killed.

Thus, sometimes, it is not possible to omit the agent in a passive sentence. This is what happens in example (2). If we omit the agent, the sentence is incomplete from a pragmatic point of view.

(2) On his death he was succeeded (active> On his death his daughter succeeded him).

Many linguists, such as Camie & Harley (2005) or Wemer & Leiss (2006) affirm that if a language has both personal and impersonal passives, the personal one will be restricted to transitive verbs, and the impersonal one to intransitive verbs. Impersonal passives, the same as happens with personal ones, can appear with or without agent. However, according to Siewierska (1984: 100) “Crosslinguistic studies reveal that agentless impersonal passives tend to predominate.” Traditionally, impersonal passives have been considered as agentless because they do not have a noun phrase with the typical morphological characteristics of noun phrases acting as subject.

Be-passives in languages such as English are similar to predicative clauses. And sometimes there is an ambiguity between them, as in examples (3) and (4):

(3) The glass is broken. // The glass is (regularly) broken by vandals.

(4) Mike was frightened. // Mike was frightened by her indecisiveness.

This ambiguity has led many linguists to call these clauses *stative passives* (these passives will be explained below). Following the definition of passive adopted in this study (see Chapter 5), under an adjectival reading and strictly speaking, they cannot be considered passives.

Another term which is relevant when talking about the structure of the passive voice is *reflexive passive*, which is not normally used in literature because these passives are frequently confused with other constructions with a reflexive morpheme. This reflexive morpheme in the passives of Indo-European languages is commonly related to the “middle voice” (something I am not dealing with in this study), although not all specialists agree. Langaker and Munro (1975) do not consider the passive agent as a built-in part of the passive. Thus, passive sentences do not derive from an active, “but rather from complex clauses with an unspecified agent embedded under the predicate *be*.” (Siewierska, 1984:164)

Reflexive passives are also divided into personal and impersonal ones. In most European languages reflexive personal passives occur with inanimate subjects, too. This kind of passive, especially on Romance languages, has a similar structure to indefinite active constructions. Indeed, as these authors point out, many are used as active sentences with a non-specified or indefinite subject, which in English corresponds to *one* (Siewierska, 1984: 173), so, although reflexive passives exist in English, they are very rarely used.

The passive voice

In English we can also find passive sentences with reciprocal pronouns, as seen in example (5):

- (5) They betrayed each other. // Each was betrayed by the other.
(Siewierska, 1984: 206)

This type of passives are considered grammatical only if each of the members of the reciprocal pronoun is separated from the other, that is to say, in this case *each* is at the beginning, and *other* is the passive agent at the end. If the active subject is plural, then it must be changed to singular if used in the passive voice:

- (6) The children hated each other. // Each child was hated by the other. (Siewierska, 1984: 206)

As Siewierska (1984) points out, this type of passive has some limitations, since if the subject is a coordinated noun phrase, it cannot be turned into the passive voice:

- (7) The boy and the girl hated each other. // * Each boy and girls was hated by the other. (Siewierska, 1984: 206)

In what makes reference to syntax, passives are different from active sentences in the word order, the verbal morphology, and the use of words or additional particles as well as in the pragmatic function of the agent and patient. However, both constructions, in most cases, express the same content, noun phrases in the constructions play the same role. In most cases, as Palmer (1988) points out, there is a correspondence between active and passive:

- (8) A little boy played the piano. // The piano was played by a little boy. (Palmer, 1988: 77)

If the passive sentence is described as a derivation from the active one, the object of the verb moves to the position of subject, and the subject places itself after the verb and with the preposition *by* acting as the agent. Although the relationship between active and passive maintains that the subject of the active becomes the agent of the passive, passives often appear without agent, as seen in example (9):

- (9) The thieves were caught. (Palmer 1988: 78)

The relationship between active and passive is not subject to time or aspect factors, and likewise, it does not change due to those factors either.

For Beedham (1981), the most common description of a passive structure is that where a clause with *be* + participle derives from an active transitive structure. In this sense, we must bear in mind that some English verbs which are apparently transitive, do not passivise. This is, for instance, the case of *have*, *suit* or *resemble*, as Beedham points out (1981:319).

Another point of view for the classification of passive structures is the semantic one. The passive voice in English, adds Toyota (2003), is traditionally divided into two types, verbal and adjectival passives. One of the main distinctions is based on the static/dynamic dichotomy, that is to say, the verbal passive is dynamic, and the adjectival passive is static. This distinction is based on the quality of the participle, meaning that the verbal passive has a verbal participle, whereas the adjectival passive has an adjectival participle.

(10) Verbal passive: The vase was broken by the cat.

(11) Adjectival passive: He was surprised at the noise.

Thus, in (10) the participle of the passive voice is dynamic, it implies a movement; meanwhile (11) does not imply that movement, it is static.

Stative passives are only described as passives if they are defined by the semantic role of the subject (and therefore it would be impossible to distinguish between passive sentences and some active sentences) or if they are defined by the presence of an auxiliary verb and a verbal adjective, as suggested by authors such as Svartvik (1966), Stein (1979) or Beedham (1981).

It is very frequently affirmed that the use of prepositions may show the difference, as in the previous examples; the agent is indicated by the preposition *by* in the verbal passive, but the adjectival passive needs other prepositions, like *as*, *at*, *in*, *with*, etc. This is the same concept of dynamism used by Embick (2004) to distinguish “past participles” falling into two categories, adjectival passives and verbal passives. Thus, the adjectival passives are formed in the vocabulary, and verbal passives in the syntax. Likewise, this author defends the existence of two types of static participle, the “resultative” and the “stative”. The former makes reference to the state which is the result of an event grammatically represented, whereas the latter is just a state, much more similar to an adjective. Nevertheless, instead of using these terms, this author prefers using “eventive passive” and “resultative passive”, example (12), which

The passive voice

correspond, more or less, with the distinction between verbal and adjectival, presented by authors such as Toyota, mentioned earlier, examples (10) and (11).

(12) *The door was opened.*

- a. Eventive passive: Someone opened the door.
- b. Resultative: The door was in a state of having become open.

Besides these two types, Embick adds another distinction, what leads to the existence of the “stative passive”: *The door was open.* (it describes the state only). Although in this case there is a difference between the participles of “resultative” and “stative” (or eventive), that is not always the case, as it would happen, for example, with the participle *closed*.

These two kinds have been differentiated in several ways. One of them implies an adverbial modification, since the “resultative passives” allow modification through modal adverbs, among others (see examples (13) and (14)).

(13) The package remained carefully opened. *The package remained carefully open.

(14) the carefully opened package. *the carefully open package.

Sometimes a “stative passive” allows an adverb, but then the “resultative passive” with the same modifier has an additional reading (the recently open door / the recently opened door). They both are interpreted as the door was recently opened in the past, but also, the second sentence has the additional interpretation of having been opened recently.

Toyota (2003) also gives us another classification of passives from a morphological point of view. In his article he explains that there are two different morphosyntactic constructions for the passive voice, the periphrastic (with an auxiliary verb) and the morphological (with a passive affix). Historically, the periphrastic passives generally derive from the time-aspect construction, and the grammaticalisation of the time-aspect marker for the passive is not completed yet. The auxiliary verb is considered as an intermediate grammatical entity between a lexical complete verb and a clitic. On the other hand, the morphological passive has a passive morpheme, which usually derives from a full lexical verb.

In terms of morphosemantic characteristics, as Toyota (2003) points out, the passive implies orientation. We understand orientation as the active voice being “actor-oriented”, whereas the passive is “undergoer-oriented”. This can be applied both to the periphrastic passive and the morphological one. However, the time-aspect relationship is a source of construction in the periphrastic passive. So, this distinction static/dynamic is often useful in the periphrastic passive. These two characteristics are combined, making possible the existence of three different types of passive: adjectival passive, resultative passive, and verbal passive. The adjectival passive is a construction morphosyntactically similar to the passive, but it is static and there is no oriented entity, it expresses the primary state. The resultative passive is static, but undergoer-oriented, and it expresses the secondary state. And the verbal passive is dynamic and undergoer-oriented.

“Therefore, constructions like *The house is surrounded by the forest* may look like a stereotypical passive-auxiliary *be*, past participle form of the verb, oblique phrase introduced by *by* – but it lacks the presence of an outer cause, and the clause expresses the primary state. The adjectival passive is the same as an active adjectival predicate.” (Toyota, 2008: 239)

Other examples of these passive are the following (Toyota, 2003: 59):

(15) Verbal passive: The house was ransacked by gang members.
 (subject) □------(oblique)

(16) Resultative passive: He was surprised at the noise.
 (subject) □------(oblique)

(17) Adjectival passive: The house is surrounded by the forest.
 (subject) □------(oblique)

(18) Active voice (static): Everybody understands the point.
 (subject) □------(object)

(19) Active voice (dynamic): Gang members ransacked the house.
 (subject) □------(object)

The passive voice

The periphrastic construction cannot express, for example, present time, and it can only be expressed morphologically. The periphrastic passive is almost always described as passive, since it shows a similar orientation to change as the canonical passive, and the construction may seem similar to that of English at first sight. However, this construction is normally considered as a “split ergative”, mainly the one based on time-aspect, since it can only occur under certain restrictions.

Within the work of Zygmunt Frajzyngier (1978) we see not only his opinions and beliefs, but also those of other authors such as Langacker and Munro (1975), who posit that the verb *be* forms part of the underlying passive construction. *Be* is considered as predicate with real semantic content, not only as a grammatical marker empty of semantic content which can be inserted and transformed. These analyses were preceded by Hasewaga (1968), who was the first one placing the verb *be* in the underlying structure of passive sentences. The only evidence that Langacker and Munro (1975) provide for the presence of *be* in the underlying structure of passive sentences is the presence of equivalents of “to be” in the superficial structure of the passive construction in some languages.

In the work of Frajzyngier (1978) *be* makes reference to the hypothetical constituent of the underlying structure with the meaning given by Langacker and Munro (1975), static, existential, asserting existence of state (only the type of passives known as passives without agent). The term “be” makes reference only to the constituent of the surface structure. Langacker and Munro (1975) declare that “static” or “existential” is an inherent meaning of passive sentences. But according to Frajzyngier (1978) this is false. He states that the mistake of these two authors consists of generalising a branch of the diagram and spreading its meaning to the whole category of passives. If a language has two ways to indicate the passive, and one of them uses a form of *be*, the static meaning of the passive will be embodied by this, and not by the form using *be*. When the two meanings of the passive are transmitted in different ways, it is not necessary for both to have *be*, even if it indicates the static meaning of the passive.

If a language has only one way to indicate the passive, this form will be ambiguous with respect to the value of the static characteristic. The ambiguity may be illustrated with the *be* passive in English, which loses its ambiguity through the context, even though there are other ways to express a non-static passive.

Be passives are not the typical way of expressing the passive voice, and when they happen in a language, there are also other ways to indicate passive. *Be* passives derive from some processes, which is possible due to the fact that the passive construction shares semantic characteristics with other constructions.

Another class of passive structures which Moessner (1994) introduces is that of impersonal passives, as *but it was supposed*, *and so it is written by Lopez*, *that he perishes on the seas*, or *it was inhibited that they should dispute any further*. In this type of passives, the noun phrase acting as object is not promoted to the subject position; instead, the construction may include a pronoun used to fulfil the syntactical requirements without providing explicit meaning, and it is normally called a “dummy”.

El-Marzouk (2004, 2013) points out that there is personalisation in the impersonal passive. In both cases the responsible entity of the action is a human agent, in the first case the subjective category without semantic meaning, and full of semantic meaning in the second case. This author distinguishes two types of impersonal passives. The first one “impersonal passive-PP construction”, which has normally an intransitive verb which needs an argument with a prepositional phrase working as a phrasal complement. This structure is present in languages such as Arabic, but not in English. The second type is present both in Arabic and in English, “impersonal passive-CP construction”, and is generally formed by a potentially ditransitive verb, but whose objects are within an CP-argument (clause), as in “It was said that Zaid was a writer” (El-Marzouk 2013: 45).

But on the other hand, he also mentions the presence of an inverted structure of the construction with prepositional phrase in English, which is usually erroneously called “pseudo-passive” in the literature. This construction allows the subjectivisation of the noun phrase within the argument of the prepositional phrase, that is, the object of the preposition. Nevertheless, even when this happens, the reference to an indefinite human agent is not necessarily maintained. Another characteristic of impersonal passives is that given by Werner & Leiss (2006a, 2006b), impersonal passives only derive from imperfective verbs¹², that is to say, impersonal passives are imperfective constructions. In this sense, the impersonal passive would be diametrically opposed to the stative passive, which is restricted to perfective verbs. These authors affirm that there is no

¹² Imperfective verbs are those which describe uncompleted actions. They focus on action, normally repeated or habitual ones, with a long duration, and the result of the actions has no effect in the present.

The passive voice

reciprocal relationship between impersonal passives and imperfective passives: “Not all imperfective passives are impersonal passives, but on the other hand all impersonal passives are imperfective.” (2006a: 260) These authors called these two kinds of passives indefinite (the impersonal ones) and definite (the personal ones). In the personal ones there is a definite object which turns to the position of subject, lacking in the impersonal ones since there is no object.

Robert D. Borsley (1988) also works with impersonal passives. The author affirms that a passive verb lacks the ability of assigning case of its equivalent active verb, and thus, when a passive verb appears in a structure, the noun phrase the active verb assigns case to must move to the place of subject in order to obtain case. Impersonal passives which appear in many languages pose a problem because they involve a passive verb but without the change of the noun phrase to the position of subject, what suggests that the passive verb can sometimes assign case in the same way as the active. The only way to keep the idea that impersonal passives involve the inherent case would be to assume that the inherent case is assigned under govern as the ordinary case, but not absorbed by the passive morphology. However, this could deprive the inherent case of any distinctive property other than not being absorbed by the passive morphology.

Other authors such as Carnie and Harley (2005) think that the impersonal passives are essentially existential constructions. The discursive function of a sentence with *there* in English is to introduce the new appearance of an identity in the dominion of discourse. Impersonal passive constructions play mainly the same role for events. A speaker uses an impersonal passive to assert a new fact within an event. Impersonal passives are basically sentences which assert the existence of an event. As such, for all intentions and purposes, they are existential constructions for events, and they are subject to the same type of restrictions as other existential constructions. When adding adverbs or another modification affecting the structure of events within a verbal phrase, those verbs which do not accept impersonal passives themselves are suddenly passivised:

(20) er werd de hele nacht aangekomen en vertrokken. > there was
the whole night arrived and left. (Carnie and Harley 2005: 48)

Those verbs which do accept impersonal passives may change their structure of events and they do not passivise in an impersonal way:

- (21) *Er werd voortdurend naar huis gelopen. > There was run home.
(Carnie and Harley 2005: 48)

In this section I have covered the structure the passive voice may have and thus, the different names these structures may have according to different authors. The grammatical aspect of a passive sentence, its formation, will be treated in the next section.

3.2.1. Formation of the passive

When dealing with the structure of passives, it is necessary to say that the structure of a prototypical passive is relatively simple, it is the verbal group which can become more complex as we add auxiliaries which give grammatical information. As Huddleston (1984) points out, the writer decides whether to include the agent or not in the sentence, since “there are no cases where the rules of syntax require an agent to be present” (Huddleston, 1984: 441). When using a passive sentence, the only change done is a change in the voice, the facts reported are the same; and the difference between the two voices is just the fact that “the passive adds a form of the auxiliary *be* followed by the past participle of the main verb” (Quirk et al. 1985: 159).

For Keenan (1985) what characterises a passive is not in the noun phrase, but in the predicate or verbal phrase, because the formation of passives in a language is made at the level of syntax in the verbal phrase. According to the author, passives are formed by deriving verbal phrases in different ways. Moreover, she explains the structure which follows every verbal form in English; that is to say, the perfect is formed by *have* + past participle, the progressive by *be* + present participle, and the passive voice is formed by *be* + past participle.

Denison (1993) defines the passive voice, at least in a provisional way, as a construction with the verb *be* and the past participle of a lexical transitive verb. As he says, there are passives, and similar structures to passives which do not exactly follow the prototype, in which the subject of the passive corresponds to the direct object of the active sentence, using the same lexical verb.

We have also the vision of Moessner (1994), who affirms that the passive voice, the passive syntagm (as the author calls it), is formed with a passive auxiliary and a past

The passive voice

participle. The neutral auxiliary is *be*, although there are other lexical auxiliaries, such as *become*, *come*, *rest* or *stand*. The passive syntagm can be spread through a modal auxiliary or with a form of the verb *have*:

(22) it may be sailed with an ordinary wind in six weeks; the graves
have not been opened. (Moessner 1994).

For Givón (1993: 77), the *be*-passive in English comes from an adjectival construction where “*be* is the main verb, followed by a predicate adjective that is the *perfect-participle* product of a transitive verb”.

These authors speak about how to form a passive construction; however, there are many different situations where a passive voice can be found. And not only situations, since in the same circumstance different types of passive can occur, and this is what the next section is going to deal with.

3.2.2. Types of passive constructions

Many different types or classes of passives have been described; now I am introducing a revision of the typological classification made by several linguists from different points of view. The kinds or classes the passives have been divided into throughout history are many. My intention is to show some of the most relevant views which can offer more possibilities for the analysis of data in Chapter 5.

Keenan (1985) divides passives into two types, basic and complex. Basic passives are characterised by lacking an agent phrase, having a transitive verb as main verb expressing an action, being the subject the agent and the object the patient. Within this kind of passives, he distinguishes between periphrastic passives and strictly morphological passives.¹³ Periphrastic passives appear in the English language and they differ from the other ones in the use of auxiliary verbs in their formation.

At the same time, within periphrastic passives, this author distinguishes several “natural classes”. And thus, we find those where the auxiliary verb is “a verb of being or becoming” (Keenan, 1985: 257), which are only present in English through the verb

¹³ The latter do not exist in English and are characterized by not using auxiliary verbs, that is to say, they are formed with suffixes.

be. Another class would be that where the passive auxiliary is a receptive verb, and it is in this situation when it is possible to find *get* passives in English.¹⁴

Regarding complex passives Keenan (1985) establishes four different kinds. Firstly, passives with complex verbal phrases, as in examples (23) and (24):

(23) John was believed to be an impostor.

(24) John was robbed and beaten.

Another type is passives with intransitive verbs, also called impersonal passives by the same author, and they are not limited to lexical intransitive, something very frequently seen in Russian. The third class Keenan speaks about is that of passives with ditransitive verbal phrases, which Keenan relates with the English “recipient passives” (where the subject occupies the object slot in the sentence)

(25) John was given the book by Mary.

(26) The book was given to John by Mary.

In the fourth place we have passives with non-patient subjects, something that does not happen in English.

Hasegawa (1968) pays attention to the terminology used by traditional grammars, and thus he distinguishes “statal passives” and “kinetic passives”, which are based on dynamism, as we have already seen in other authors such as Werner & Leiss (2006) or Embick (2004). Hasegawa (1968) affirms that only kinetic passives constitute the genuine passive construction, since the statal ones are different from the real passives in their interior representation and are therefore not passives. The example is given in “The door was shut”, examples (27) and (28), where he assumes there is a variety of *be*+Pred construction:

(27) *the door* past *be* En [*shut*]_s (Passive)

(28) *the door* past *be* [En *shut*] Pred (Statal ‘passive’) (Hasegawa 1968: 236)

Minoji Akimoto (2000) deals with constructions such as *V*+*NP*+*P*, for example, ‘lose sight of, take care of’, in relation to passivisation. This structure includes a general

¹⁴ Finally, we find those where the passive auxiliary is a verb of movement, and they do not exist in the English language.

The passive voice

verb with a meaning of action (do, give, make, take), a “deverbal” noun (charge, leave), and a prepositional phrase at the end:

(29) We took advantage of the students.

The English language allows two kinds of passive for the construction V+NP+P:

(30) Advantage was taken of the students. (“inner passive”)

(31) The students were taken advantage of. (“outer passive”).

Akimoto (2000) explains that the most important aspect lies in whether the preposition is compulsory or not. He also explains that in previous studies there is no distinction between “deverbal” nouns with suffixes or without them. Nouns in this type of construction are mostly “deverbal” nouns; those with suffixes normally only allow the construction of “inner passives”. Deverbal nouns without suffixes usually allow “outer passives”, although they sometimes allow the construction of the “inner passive”.

Another vision we have through Akimoto (2000) is that of Matsumoto (1999), who points out that the “inner passive” is common, while the “outer passive” is rare. And he also talks about Nunberg et al. (1994), who mention the existence of double passives, that is, the possibility of having in the same construction “inner” and “outer” passives, as would happen with the expression *take advantage of* seen in examples (30) and (31) above.

Some examples that Akimoto (2000) shows of the two types of passive (“inner” and “outer”) are the following: in present-day English the “inner passive” is more common with *make use of* and *take notice of*. However, cases such as *take care of* and *take advantage of* occur with the “outer passive”. The case of *have recourse to* is different because it allows both kinds of passivisation, but none of them is possible in present-day English.

Another topic to be dealt with when speaking about passives is that analysed by Marianne Hundt (2004), the progressive passive. For her, the extension of the progressive aspect in *be* passives is a logical step in the process of grammaticalisation of the progressive aspect. This new form was first used at the end of the 18th century or beginning of the 19th century, and it was not very well welcome because it had to compete with the passival, “an earlier use of an active progressive with passive meaning (e.g. The house is building).” (Hundt, 2004: 79). This author explains that the *be*

progressive + adjective/noun phrase is not a precursor of the progressive passive either. Most linguists agree that these forms started appearing after the passive progressive was used for the first time. The first testimony registered of the progressive with *be* is from 1923. Hundt (2004) also states that the *get* passive evolved and appeared in Modern English. In addition, through this author we have access to opinions of other authors such as Scheffer, (1975) who declares that the use of gerundive passives increased in the 16th century, and their use was very frequent in the 17th century.

We can also find the differentiation between direct passives and indirect passives. Thus, Denison (1993) poses that direct passives are those in which the subject corresponds to the direct object of the active. In the indirect passives, however, the subject corresponds to the indirect object of the active. “Indirect passives appeared in Middle English and the impersonal passives went out of use” (Osawa, 2010: 125). These impersonal passives are those where the verb lacks the noun subject (Denison 1993):

(32) Presents was given her.

(33) Her was given presents.

In the same way we encounter the prepositional passive, where the subject of the passive corresponds to the object of a preposition in the active, and which means an example of the “verb-preposition collocations” that are often in Modern English:

(34) Jim was laughed at.

If we would like to go back to the origins of the prepositional passive, we would find the complex prepositional passive, with examples such as (35) and (36)

(35) The school was set fire to.

(36) Jim was taken advantage of.

Svartvik (1966) talks about passives with agent, which may be passives with animate or inanimate agent. He says that in the case of inanimate ones, these elements can be considered as agents or another type of adjuncts, and then they are regarded as agentless passives. This kind of passive – without agent – is the most frequent one.

He also deals with “quasi-agentive passives”, which are placed in a middle position in the scale of passives, since their components have both verbal and adjectival attributes. Their verbal aspect is expressed in their potential transformation to extensive

The passive voice

active propositions, and their adjectival aspect is expressed in their potential transformation to intense active propositions. These quasi-agentive passives have two subclasses, the attitudinal passives and the emotive passives. In the first case they are very close to passives with agent, and they sometime have the chance to have the agent with *by* as an extension:

(37) We are encouraged, therefore, to use the radar data to obtain drop-size distributions. (Svartvik 1966)

The second class may have quasi-agents which differ from the common ones with *by* in that they are inanimate and besides *by* phrases they also accept propositions with *that* and infinitives with *to*. Svartvik (1966) also explains the agentless passives, and he says that they are the end of the scale of passives, where the relationship with the active is slighter as in (38):

(38) Cavendish inquired with grave courtesy, ‘Is the thesis finished, Doctor?’

Stein (1979) also comments on the agent, and he supports the idea that the agent is optional in the passive voice.

Freidin (1975) works with another type of passives, the truncated ones, which can be generated through a transformation with a rule of ellipsis which eliminates the *by*-phrase: John was hit (by someone); Alice was bitten (by something). It can also be formed with a rule which places the object compulsory (passivising the verb) in the place of the subject when the latter is lexical and semantically empty:

(39) John was hit.

Seoane (2006) discusses on two functions, subject backgrounding and object foregrounding, which, even being different, may be identified as an only passive construction. However, the function of the subject is without doubt the first reason of the use of passives lacking the *by*-phrase, the so-called short passives. The bigger presence of complete passives in formal texts is probably conditioned to the need of introducing old information in an initial position, something not eliminated in formal texts. Thus, the distribution of information is not marked because the order of constituents has been inverted and the agent is placed before the subject.

As Givón (1993) explains, there is no single reason why the agent of a passive may or may not appear in a text. Up to five different motives are described by this author; the agent may be unknown or unrecoverable; anaphorically predictable from the preceding discourse; cataphorically given in the subsequent discourse; predictable on general grounds, i.e. stereotypical; universal and thus left unspecified; or may be deliberately suppressed in order to avoid culpability (Givón, 1993: 48). Thus, the authors can write without mentioning any concrete agent and in a more abstract way (Chafe & Danielewicz 1987).

Another distinction is the one provided by Siewierska (1998). This author differentiates between promotional passives, where the patient of the corresponding active/direct voice promotes the subject in the passive/inverse; and the non-promotional passives, where there is no such change, the patient is not the subject of the passive/inverse. Both constructions are different in what makes reference to the state of the agent. Thus, the agent of the passive is a syntactic adjunct, while in the inverse it is a syntactic argument. In the passive there is no agreement between the verb and the agent, but it can exist on the inverse passive, although it is normally not obvious. She goes on explaining that the passive is an intransitive and monovalent construction, while the inverse is bivalent and transitive, or potentially de-transitivised, but not intransitive. She also talks about the change of the marked accusative patient into a non-marked subject, which cannot happen in the case of non-promotional passives. Since passive clauses are intransitive, the agreement marking in the passive is the same as in the intransitive actives, that is, the subject. As a result of the reanalysis of the passive as active ergative, the subject is reinterpreted as patient.

Another author talking about the full and the truncated passives is Rodman (1981). For this author it is unusual for the English language to have full passives; and since the truncated passive may be used to describe the state of scientific knowledge, many people associate it with the scientific style.

Finally, Davison (1980) works on peculiar passives, those which have adverbial constituents working as direct objects, and which are turned into passives. The objects of prepositions are similar to the objects of verbs if these are pronouns; in fact, some verbs have prepositions before their direct objects:

(40) This chair has been sat on by Fred (Davison, 1980: 45).

The passive voice

Sentences with peculiar passives in English have more than one rhetoric function, and for this author, their main use is making sure the new subject has attributes connected to the fact described on the sentence. Svartvik (1966) concludes saying that the use of the passive in texts varies considerably, and that examples taken from scientific exposition are the ones which most frequently use this type of construction.

All these types of constructions seen above are included under the term passive voice; however, the passive voice has some limitations and constraints which need to be treated in order to have a clear vision of what the passive voice implies.

3.3. Some restrictions on passive constructions

Even though there are many authors who deal with passives, not all of them write about their restrictions and, of course, not all of those who write about them do name them. Thus, Áfarli (1989) claims that the formation of the passive voice in English is very restrictive, since it cannot be formed from intransitive verbs nor impersonal passives can be formed from transitive ones. Besides, in passive clauses formed from transitive verbs, the noun phrase which was placed after the verb must be compulsorily changed to the subject position, as seen in example (41). However, although the English language does not allow impersonal passive constructions, there are impersonal ergative constructions built up with only a few verbs considered as ergative in English (see example (42)).

(41) A man was seen

A car was bought (Áfarli, 1989: 102)

(42) There arose a riot

There began a riot (Áfarli, 1989: 106)

There is one term not widely studied yet related to the passive voice, the *inverse*. In order to understand this new concept, we can use Thompson (1994: 47)'s words, explaining "that passives are marked by the suppression of the agent. Inverse constructions, on the other hand, are defined by their functional (usually not structural)

promotion of a non-agent". In a broad sense, what the inverse does is to mark an increase in topicality of a non-agent, while the passive marks a suppressed agent.

It is not very clear whether this construction could exist in English, since on some occasions it seems difficult to differentiate between a passive and an inverse. Through Siewierska (1998) we know that Givón states that the inverse constitutes a more promising source for the ergative marking than the passive, because inverse clauses are functionally more similar to ergative clauses than passives. Thus, he defines the active as that in which the agent is more topic than the patient, but where the patient retains considerable topicality. The inverse is the one where the patient is more topic than the agent, but the latter retains considerable topicality. And in the passive the patient is more topic than the agent and the agent is extremely non-topic. He explains that the passive differs from the active more than the inverse, because the agent of the passive is non-topic, whereas in the inverse it keeps considerable topicality. For the passive to become the non marked active/ergative construction, it first needs to be used with relatively topic agents, and then with even more topic ones. Once done, it will not be a passive anymore, but an inverse.

Junichi Toyota (2003) reminds us that the passive is different from language to language, and even within a language there can be variations in the passive or similar-to-passive constructions. Some nominative-accusative alignment languages show partial ergativity, something known as split ergative. This system implies several conditions. Some include a change of orientation and on the surface this construction may seem a passive construction. Historically, the ergativity in some languages is supposed to be derived from a previous passive construction, and it is true that there is a link between these two constructions. However, due to this link and superficial similarity, some split ergative constructions are described as passives, as can happen in the Irish language. The passive in Irish is formed morphologically (known as an autonomous form in the Irish grammar), and it is a kind of impersonal passive, especially a type without subject with verbal morphology. Historically too, the passive morphology derives from the agreement marker of third person, what is a common source for the impersonal passive morpheme. When an agent is introduced in the passive, it can be mentioned in two different forms, that is, with the use of a preposition or with the use of the oblique or instrumental case. The preposition *by* is used in English to indicate the agent. By itself, *by* does not express source, but goal or path. The use of *by* as an agent marker in

The passive voice

English is “very unique cross-linguistically” (Toyota 2003: 65). Its ability to express goal or path is not an Indo-European legacy, that is to say, genetically and geographically it is unique. Historically *of* was the most popular choice until the 16th century. This shows that the agent marker in English was typologically more natural, but somehow it changed later on.¹⁵

The periphrastic passive in English often makes periphrastic constructions, which are similar to passives structures from other languages. This can change details in the description of the language in question (it happens with Irish). The periphrastic passive is less grammaticalised in comparison to the morphological one.

The English language has the so-called labile verbs¹⁶, as in examples (43) and (44).

(43) The ice melts (intransitive).

(44) The sun melts the ice (transitive).

Sometimes they are considered as a kind of ergative. Typologically, ergativity can only be distinguished when there is a special morphological marker. Without it, English labile verbs are rarely considered ergative, but they show a similar organisation in the structure of the argument with ergative languages. These English labile verbs may be a case in which the descriptions are sensitive to more typological characteristics (Toyota 2003).

Another author who offers a structural vision of the passive voice is Freidin (1975). He compares it with the transformation, which expresses better the relationship between active and passive because its nature is structural. He agrees with Katz & Postal and Chomsky (from the 60s) with the fact that passive and active sentences derive from different structures and that passive is a rule of compulsory character. Thus, the passive does not relate derivations from an active sentence with its corresponding passive. This means there is no syntactic rule that explicitly expresses the active-passive relation in the syntactic component. Freidin (1975) points out that there are two weak

¹⁵ We must bear in mind that the periphrastic passive construction is commonly found in Indo-European languages. Historically the proto-Indo-European had no rigid passive voice. Instead, there was a distinction between active voice and middle voice; a similar construction to what today we call passive in English, that is, ‘auxiliary + past participle of the main verb’ was used in the beginning to create both the perfect tense and the resultative aspect.

¹⁶ “In general linguistics, a labile verb (or ergative verb) is a verb that can be either transitive or intransitive, and whose subject when intransitive corresponds to its direct object when transitive.” (Kulikov & Lavidas 2014)

spots in the transformational analysis of passives: derivation and interpretation of truncated passives (for example without *by*-phrase); and the specification of a lexical characteristic in the predicate, which is able to distinguish passivized verbs and non-passivized verbs. This author also reminds us that according to the transformational theory the passive predicate is analysed as a verb preceded by an auxiliary *be* and followed by a prepositional phrase with a noun phrase. But it is also possible to analyse the passive predicate as an adjectival phrase, and then what we have called passive verb, would be now an adjective. This definition is partly based on the superposition of adjectives and passive predicates. The passive predicate, like most adjectives, only governs one argument, while the active predicate normally governs two (generally compulsory). That is why, in terms of semantic function, passive predicates work more like adjectives than verbs. Freidin (1975) declares that we can say passive predicates are not adjectives because they do not appear on constructions where we normally have adjectives. Finally, Freidin (1975) comes to the conclusion that if we consider passives as adjectives, the auxiliary *be* can only be analysed as copula, since all adjectival predicates have a copulative verb. Under this analysis, passive *be* would be considered a main verb, not an auxiliary.

For Palmer (1974) the passive is the grammatical structure which exemplifies the concept of transformation. Before proposing the idea of transformation, it was thought that active and passive sentences were related only semantically. But the voice (with transformation) is not less formal than time (or aspect or phrase). Transformation must happen to preserve the grammaticality of the sentence, and, with rare exceptions, all actives have a corresponding passive. The passive is used when the agent – the subject of the active verb – is unknown or not specified:

(45) He was killed.

(46) That work was soon completed. (Palmer 1974: 86)

The use of the passive voice usually implies an emphasis, what is useful mainly in narrative to keep the subject in consecutive sentences, or in sentences with subordinate clauses:

(47) John came in. He was immediately welcomed by the committee.

(48) John came in and was immediately welcomed by the committee.

(Palmer 1974: 87).

The passive voice

Another author, Parker (1976), says that it is very frequent to consider that the passive voice was developed from medially inflected verbs. In order to maintain this affirmation, he bases on a series of facts. The first one is the presence of deponent verbs¹⁷. He also mentions that middle forms which existed in historical languages do not only work in a middle sense, but also in a passive sense. At the same time, he indicates that when medially inflected, it had an active and/or transitive force, although they are normally considered reflexive (this type of verbs is used to express active, transitive and reflexive sense). And finally, he also points out that in Pre-Indo-European there are no traces of the passive voice, that the passive sense of the middle inflection is the result of what was earlier called mis-assignment of constituent structure (MCS). Thus, the passive voice is a derived voice, and therefore, it does not exist on the original language (Pre-Indo-European). The MCS is a mechanism of change based on the assumption that different speakers might make different hypothesis about language patterns – such as children or learners of a language. When a speaker internalises a “wrong” rule of a structure and it spreads, the language will show signs of change. In the case of the passive voice, it would appear as a wrong structure of the middle voice.

Nearly a hundred years ago, Poutsma’s (1926) vision was that there were four possibilities of passivisation for the V+NP+P constructions:

1. Passivisation of the (pro)noun governed by the preposition as the only possible passive (outer passive): Some things had been lost sight of.
2. Passivisation of the noun phrase as the only possible passive (inner passive): Every allowance is made for difficulties.
3. Possibility of two passive constructions: New means must of necessity be had recourse to. / Recourse was had to the present participle.
4. No conversion to passive, what she calls composite predicates: *pay court to*, *set foot on* o *take leave of*.

The idea that the development of V+NP+P constructions is a four step-process of idiomaticisation comes from Akimoto (2000). He exposes the process saying that first, the constituents are not restricted. On the second step, the relation between verb and noun is settled, the verb and the preposition are welded, and the noun loses part of its

¹⁷ “Lehmann (1974:28) says that deponents are verbs inflected in the middle that have lost their middle meaning.” (Parker 1976: 453)

nominal character (noun, definite/indefinite articles), that is, it loses its category. On the third step there is a reanalysis of the structure of constituents. And on the fourth one, all the constituents are idiomatised in one lexical unit.

For Hundt (2004), that main difference between passivals and *be* passives is that the latter includes in a more explicit way the morphological marker in the verb for the passive voice, and, therefore, they are more appropriate for an unambiguous passive meaning. The grammaticalisation of the progressive passive may appear in three different ways: related forms which could have played a role on the evolution of the progressive passive. They can also be forms which evolved simultaneously and express the final distinction between auxiliaries and main verbs. And they may be forms which weaken as a result of the grammaticalisation of the progressive passive.

James P. Blevins (2003) points out that descriptive grammars use the wide term “passive” to any alternation which inhibits the expression of the subject. There cannot be characterisation of those languages which allow accusative and transitive passives, because there are no such languages. There are no accusative passives because the passivisation eliminates the logic arguments of the subject, and the lack of a logic subject is exactly what defines the non-accusative as such. There are no transitive passives without subject because the failure in identifying any structural argument as a superficial subject shows that the logic subject has been suppressed and not eliminated. While the passivisation detransitivises a verb by eliminating its logic subject, the impersonalisation maintains the transitivity, and it hardly inhibits the syntactic development of the superficial subject. So, the structure of the argument of a passive verb has one term of the argument less than an active verb. Since direct passivisation does not restrict superficial subjects, it can feed the impersonalisation in languages such as Irish.

Passives are divided into two subclasses, personal passives and subjectless passives. Personal passives are usually seen as “the core of passives” (Chomsky 1965), because they show all properties associated to the passive construction. Often passives without subject have an “indefinite”, “human” or “agent” interpretation.

For linguists with a semantic approach, the subjectivisation of the object of the preposition is generally conditioned to two grammatical restrictions. The first one makes reference to the structural intrusion of noun phrases, that is to say, there cannot

The passive voice

be a noun phrase with direct object between the main verb and its preposition, otherwise the noun phrase with preposition cannot be subjectivised.

(49) The subject was talked about. / Lit: It was talked about the subject.

(50) The land was walked on. / Lit: It was walked on the land.

El-Marzouk (2004, 2013) says that if this restriction is true, it would explain the lack of grammaticalization in cases such as the following example:

(51) The spoon was eaten with. / *The spoon was eaten beans with (El-Marzouk, 2013: 52).

The second restriction consists of the semantic codification of noun phrases, that is, the noun phrase prepositionally marked (the object of the preposition) cannot be at the same time direct object. If so, the noun phrase could not be subjectivized. Again, if this restriction were correct, it would serve to explain the lack of grammaticality in sentences such as:

(52) The box was kicked. / *The box was kicked at (El-Marzouk, 2013: 53).

After explaining that the impersonal passive does not imply semantic passive, Werner & Leiss (2006: 274) state that the term impersonal passive is not correct. According to them, this term is wrong, since this type of passive is not impersonal at all, it is actually personal. This is considered so in the sense that impersonal passives derive from arguments with a fixed position, and whose subjects are characterised by being agent and human, what semantically is not a passive.

To these authors passivity is restricted to real transitive verbs, and it is a transition of propriety among the source, the agent, the aim, and the patient. And the impersonal passive does not fulfil the criteria. Using as a base what other authors had already proved, Werner & Leiss (2006) explain that impersonal passives need an indefinite human agent (or at least animated) and not a subject that the passivised intransitive predicate can choose semantically, such as *canine* would be selected for *bark*.

They also speak about the impersonal and personal passives, and their diachronic development, to show that probably personal passives appeared before

impersonal passives, since the former came out of transitive verbs before the passive morphology was applied over intransitive verbs.

Regarding phrases with agent, Keenan (1985) divides passives in instrumental (they do not exist in English), locative, seen in example (53), genitive (they do not exist in English either), those others which do not have apposition (the English language does not have them), and those which are incorporated to the passive verb, as in example (54), and which are possible in English only with certain verbs.

(53) He sat by the window and was seen by Mary.

(54) This project is State-controlled.

It is well known that passives are not only formed from transitive and ditransitive verbs, but also from verbs which seem intransitive:

(55) George Washington slept in this bed.

(56) This bed was slept in by George Washington.

Since many linguists define transitivity through passivisation, they also state that sentences such as *George Washington slept in this bed*, which seems intransitive, are in reality transitive or derived transitive (Siewierska, 1984: 64)

Most linguists consider passives as constructions without subject. Others say they do have a subject, but “only either a dummy one like the Dutch *er* or a covert indefinite human one” (Siewierska, 1984: 93), which is not a real subject, but only a grammatical device to be able to use a verb in its finite forms. Besides, they disagree on the importance verbal morphology has. For some, a clause must have a passive verbal morphology in order to be classified as an impersonal passive. Others do not see that restriction necessary.

In the best-known European languages, the passive verb appears in the past participle form, a form which can also work as adjective and which provokes problems when interpreting these forms as adjectives or past participles. In English the use of the passive is more likely when the definite patient is higher on the hierarchical animated scale than the indefinite agent, as in examples (57) and (58):

(57) Charles was bitten by a snake.

(58) I was woken up by a knock at the door. (Siewierska, 1984: 223)

The passive voice

When the patient is definite or animated and the agent indefinite or inanimate, the use of the passive is also very probable:

(59) Anne was deafened by the noise.

(60) A horse was struck by lightning. (Siewierska, 1984: 223)

However, when there is no discrepancy in animation or definition, the use of the passive is quite reduced.

On rare occasions in English the agent may be placed in initial position, as in example (61), but the subject cannot go after the verb. Although the passive voice is used in colloquial speech and not only in written one, this construction is associated to more formal discourses and written texts.

(61) By its many migrant residents Mona Vale is called 'Monna Wile' (Siewierska, 1984: 227).

Not all passives without agent are strictly impersonal, sometimes the agent can be deduced or is implicit in the verb. It can only be considered as impersonal if the agent involved is the human being in general, or a non-specified group of individuals:

(62) Individualism is prized, egotism is not. (Siewierska, 1984: 237)

For Palmer (1987: 77), perfect and progressive forms in the passive are quite unusual. Passivisation is only possible with transitive verbs, that is to say, with those which have objects. *Give, tell, leave, bring*, are ditransitive verbs, which have two objects or one object and one noun phrase preceded by the preposition *to* or *for*. When making the passive, the object is the subject of the passive, but when there are two, this task is carried out by the former. The two active constructions produce two different passives:

(63) The teacher gave the boy a present.

The boy was given a present by the teacher. (Palmer, 1987: 79)

(64) The teacher gave a present to the boy.

A present was given to the boy by the teacher. (Palmer, 1987: 80)

There are cases where the active-passive relation does not happen, normally because, even when there is an active sentence, the passive one is not possible. There

are verbs which seem transitive and have objects, but which never, or hardly ever, occur in passive, as the verbs *resemble* or *lack*:

(65) John resembles his father. // * His father is resembled by John.

(66) The car lacks a mirror. // * A mirror is lacked by the car.

(Palmer, 1987: 81)

When it is about noun phrases which express quantity, they normally do not work as a subject in a passive:

(67) The book weighs a pound. // * A pound was weighed by the book. (Palmer, 1987: 82)

Although these verbs are intransitive, they can also work as transitive, and then they do passivise, as seen in example (67).

(68) The greengrocer weighed the plums. // The plums were weighed by the greengrocer. (Palmer, 1987: 82)

In sentences like *This problem is complicated* or *He was interested in linguistics*, the constructions follow the model verb *be* followed by past participle, but it is obvious that they are not passives, they differ from passives in two aspects:

- the function of the form of past participle is that of the adjective,
- they do not have a corresponding active sentence, and the past participle form is lexically restricted, that is to say, they cannot be formed freely from any verb.

The term “pseudo passive” is used here when there is not a plausible corresponding active, and when the form of the past participle is clearly a past participle (Palmer 1988)

Through Moessner (1994) we see that *be* passives are ambiguous, since they can express an action (and then they are called ‘dynamic’ or ‘kinetic’), or a state or result (‘static’ or ‘stative’). She also says that “The term agent will be used for that constituent in a passive construction which realises the subject function in a corresponding active construction.” (Moessner 1994: 221)

3.4. A historical perspective of the passive voice

Bennett (1980) and Osawa (2010) offer a historical perspective of the passive voice. Bennett compares Old and Middle English periods and says that Middle English allows new kinds of passive which were not present in Old English: personal passives from verbs governing dative, prepositional passives like *this bed was slept in*, and passives whose subject is an indirect object. These new structures do not appear due to the rules of formation of the passive (there is always a relation between direct object and subject), but due to the creation of new classes of direct object. Thus, these new types of passive coincide with the birth of new kinds of direct object. In Old English, generally, only a noun phrase in accusative in an active sentence could be the subject of its corresponding passive. This continued being the rule in Middle English (Gramey 2012), but in Modern English the dative shift creates new direct objects, like *Bill* in example (69).

(69) John gave Bill the book. > Bill was given the book by John.

In Middle English, as in Old English, the passive transforms direct objects in subjects, but the loss of inflections made those which were indirect objects, direct objects, and they automatically became part of passives as the direct objects they were converted into.

The same author goes on explaining that nowadays there are no impersonal prepositional passives, which existed in Modern English, as seen in example (70).

(70) this bed was slept in.

In Modern English these constructions were possible because they followed these rules:

- combinations verb + preposition of this type form a syntactic unit and they are often substituted by a transitive verb (one word) whose meaning is more than the sum of its parts,
- they can be coordinated with transitive verbs, sharing the same object,
- as it happens with relative sentences where the preposition may go before the relative pronoun or go after the verb, there is a considerable number of these constructions where the preposition can go in both places.

Los (2002) affirms that it is not a coincidence that from the beginning of the 15th century the language has produced a number of innovative instruments which can transform topic constituents in subjects, like prepositional passives and what he calls “subject-to-object raising”. This last construction usually occurs in the passive because the passive construction transforms the patient of an active transitive clause into the subject. Seoane (2006) points out that it was in the Early Modern English period when the consolidation of indirect and prepositional passives mentioned by Los took place, as well as the establishment of the *by*-phrase.

Among synchronic resources we can find those which are more recent than periphrasis with *be*. Nevertheless, there are some diachronic dates which show that at least in some languages the periphrasis with *be* is an innovation. The relation between passives with *be* and nominal sentences is not accidental. Inherent passive sentences have, according to Frajzyngier (1978), at least two types of meaning: a static meaning and a non-static one. If a language has a passive construction, whatever the type might be, there is a situation in which there are two ways of marking the static category: the passive construction and the noun sentence. But if a language has only one passive form, this would be ambiguous regarding the static/non-static distinction. (In present-day English *be* passives are ambiguous in this case) So, it is very likely that if the passive construction is ambiguous, another form will be used to avoid the ambiguity in the construction. According to Frajzyngier, in Old English the first static form was the periphrastic passive. Non-static passive was formed with the verb *weorþan* ‘to come to be’, ‘to get to be’. Probably the *be* passive turned to ambiguous when the use of the verb *weorþan* fell down.

Throughout the history of the English language the *be* form was preserved, sometimes with an ambiguous meaning and sometimes only with a static meaning. However, we can also see a different situation, where the stable form, or the original, is not static or ambiguous, and so, to avoid ambiguity the form which is essentially static would be used. Frajzyngier (1978: 153-154) also points out that the English *be*-passive is stative on first instance.

Olga Fischer (1991) focuses on the use of the passive infinitive, and her first observation is that in Old English the active infinitive was used where nowadays the passive one is used. However, there are occasions when the passive infinitive can be found in both languages. Thus, both in Old English and in present-day English, this

The passive voice

infinitive (bare infinitive) can be found after modals, as shown in examples (71) and (72).

(71) It can be found.

(72) He may not be disturbed.

In Old English the passive infinitive was formed by a passive auxiliary and the past participle of the main verb, which did not have to be conjugated. In present-day English this kind of infinitive is used in predicative position, after the verb *be*, as in the following cases:

(73) They are to be blamed therefore.

(74) What's to be done next? (where *be* is a semi-modal).

(75) His only fear was to be killed by his own men (where *be* is the main verb).¹⁸

In Old English it is strange to find subject-control constructions, where the subject of *be* is not the object of the infinitive. In these cases also, what we find is a translation of the periphrastic future in Latin or of a gerund construction with *ad*, as in examples (76) and (77) (Fischer, 1991: 148).

(76) *tu es qui venturus es > eart þu ðe to cumenne eart > 'are you (the one) who is to come?'*

(77) *et virtus erat domini ad sanandum eos > & drihtnes mægen wæs hig to gehælene > and of-the-lord power was them to heal > 'and the power of the lord would heal them'.*

In present-day English the passive infinitive may appear after a noun, something which did not happen in Old English. Adjectives placed after adjectives are more frequent in active than in passive structures and the form of the infinitive is linked to the kind of structure of the adjectival construction. Traditionally, two types are distinguished: eager-class and easy-class. In the former (example (78)) the subject of the infinitive, which lacks lexical meaning, is considered as part of the subject of the matrix

¹⁸ Examples from the first group do not appear in Old English; the oldest cases date from 1300.

predicate the adjective forms part of. In the latter (example (79)), the subject of the infinitive is an arbitrary PRO¹⁹ (Fischer, 1991: 153):

(78) *He is always eager PRO to please.* (eager)

(79) *She is easy PROarb to please.* (easy)

The castle is beautiful PROarb to look at. (easy)

Going on with the English used nowadays, Fisher (1991) explains that the passive infinitive goes with the main verb in two types of construction: in example (80) it works as an adverbial adjunct, normally expressing purpose. On the other hand, in (81) it is found in an accusative-and-infinitive construction. Its use as subject is not very frequent nowadays. When it is used, it usually goes with the verb *to be*, and then, it is difficult to know what noun phrase acts as a subject and which one as a complement, as in example (82).

(80) Jesus came to John to be baptised.

(81) It's terrible to see a foreigner be treated like that.

(82) To be advanced in the company is our chief design. (Fisher 1991: 159)

In Old English the periphrastic passive infinitive is occasionally the complement of modal verbs. It never appears as a complement of the verb *to be* (whether modal or main verb) nor as an adjunct of a noun or adverb.

The situation changed in the Middle English period. Placed in a sentence after adjectives the passive infinitive developed very quickly, and the first examples appear towards the end of the 14th century. Located after the verb passive infinitives date around the year 1300, with a semi-modal sense, and from the beginning of the 13th century as main verb. The passive infinitive as subject in Middle English is not frequent, as Fischer (1991: 162) explains, but is not frequent in its active version either. The passive form with impersonal verbs becomes an idiomatic expression accepted in Modern English.

Not only the verb is important, there are adjectives which do not work in all situations. For example, “like” in Middle English was used as an adjective with the meaning of *similar*. It is a special adjective since its use was and is predicative because

¹⁹ “the non-lexical subject of the infinitive is arbitrary in reference” (Fisher 1991: 148)

The passive voice

it has an adverbial function. In Old English this adjective was not in infinitive constructions, and it only changed in Middle English when it got the sense of *probable* under the influence of Old Norse.

Davison (1980) says that historically the relation between passive and active structures is that of optional variation, in all types of grammatical approaches. However, some passives do not follow the rule and they have different conditions for its use, or they use something different.

This author deals with the term “pseudo-passives”, which would imply both object of verbs which need a preposition, and noun phrases which come out of adverbial prepositional phrases. She mentions that earlier on there were problems with these passives in what makes reference to define what type of noun phrases not working as an object can become a subject. This author gives examples of adverbs or adverbial phrases which can become a subject when they are used within a passive structure. Thus, those of place, both space and direction, are valid candidates:

(83) This chair has been sat on by Fred.

(84) That bed has been slept in today. (Davison, 1980: 45)

The same happens with modal adverbs, together with some accompanying phrases:

(85) That knife has been cut with too often without being sharpened.

(86) This spoon has been eaten with. (Davison, 1980: 45)

This does not happen with causative expressions:

(87) John ran away from cowardice. (=because of cowardice)

*Cowardice was run away from by John. (Davison, 1980: 45-46)

Nor with, usually, time adverbs either:

(88) John and Sue quarrelled before/during/after dinner.

*Dinner was quarrelled before/during/after by John and Sue. (Davison, 1980: 45).

But there are some time expressions which do passivise, such as examples (89) and (90).

(89) This experience can be lived through.

(90) This very same thing was gone through by Napoleon at Wagram.

(Davison, 1980: 46)

The type of adverbial is important in determining a passive, since time and cause adverbials are not generally affected, spatial, directional and instrumental ones can be promoted by passives, and those of accompaniment may vary: “driven with in 25b vs. tagged along with in 24” (Davison, 1980: 46).

In order to understand all these possibilities, it is necessary to remember that the English language, different from others such as German, Dutch or Spanish, always needs a noun phrase for the passive construction. According to Denison (1993), changes underwent in passives have to be searched in history, differentiating six areas: function and meaning of the passive; form and function of the past participle; choice of the auxiliary verb; paradigm of the auxiliary verb; verb-object syntagms in the active which are available to form the passive; expression of agent. Regarding the first area, the main distinction is between what we know as action passives and static passives. In the second area, form and function of the past participle, this author explains that in Old English the past participles of passives could or not agree with the passive subject in case, gender and number. Therefore, the lack of concordance we have nowadays in past participles may come from a possible reanalysis of copula *be* + participle adjective to auxiliary *be* + lexical verb.

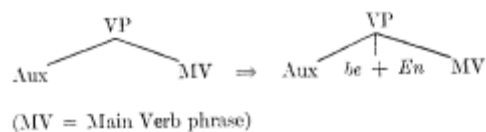
The choice of the auxiliary verb in Old English was different from that of the present, since besides the verbs *beon* and *wesan*, *weordan* (become) was also used. And following with the verb, in the fourth area we are told that the most meaningful is the late appearance of new kinds of passive, which did not exist in Old English, such as the indirect passive, the prepositional passive, or the second passive in VOSI constructions. In what regards the agent, passives are normally used when the agent is unknown or irrelevant. When it is expressed, it has the form of a prepositional phrase.

When the paradigm of a passive allows other auxiliaries to go before the auxiliary verb, that could be considered as a sign of grammaticalization.

Hasegawa (1968) analyses the passive voice taking into account previous analyses like those made by Chomsky, Katz & Postal, or Lees. These authors were different in aspects such as considering the *by*-phrase a manner adverbial (not all verbs

The passive voice

allow this), or considering the passive as a process of adjunction, where *be+En* would be part of the auxiliary, and there would be a change in the verb phrase:



(Hasegawa 1968: 231)

Apart from the structure the passive voice has through history, any change in the use of the passive voice in different periods of time is also worth noticing. Making use of Crystal's (2003) explanation, we can say that the passive is not frequent in oral speech; and in writing, it is more frequently used when the author uses a context with an impersonal style, such a scientific publication. "The highest percentage of passives is found in academic non-fiction text" (Givón, 1993: 53), and it was so in the 18th century, when it gradually moved on towards the experimental activity, and therefore, related to the Material process (Banks, 2008: 102). This tendency went on during the 19th century, and the passive voice was used "to describe the actions of the researcher or the effects produced on the experimental materials" (Banks, 2008: 104).

With the change of century, there is also a change in categories, and if the Material process category was the tendency in the 18th and 19th centuries, the 20th century saw a rise of the Mental category; this was due to the fact that the cerebral activity replaced the physical activity (Banks; 2008: 11).

All the different passive structures seen have in common the use of the verb *to be*. However, it is necessary to go a step beyond and check the different options the English language may have to express the passive voice with different auxiliary verbs.

3.5. Verbs involved in the passive: *be* / *get*

Svartvik (1966) says that when dealing with the passive voice in English, the only serious rival *be* has as auxiliary verb is *get*. In the particular case of the English language, Hasegawa (1968) thinks that *be* passives (*be + en*) and *get* passives (*get + en*) cannot be considered as simple varieties of the same passive formation because they differ in meaning.

Freidin (1975) explains that verbs which admit the passive construction take modal adverbs freely. But opposite to what this analysis suggests, and following Lakoff

(1971), Freidin (1975) explains that there are data showing that the *by*-phrase is not only generated with modal or manner adverbs, because verbs such as *know*, *believe*, *think*, *see*, *consider* and *hear* can be passivised but they do not admit the free use of modal or manner adverbs. There are some movement verbs, like *move*, *push*, *force*, *remove*, *shove* and *throw*, whose subjects are interpreted as agents but do not necessarily have another semantic function associated to movement predicates.

Downing (1996) talks about the passive making reference only to the study of semantics in *get* passives. Thus, she summarises what other authors have said about the topic. Svartvik (1966) came to the conclusion that the *get* passive is very rare, hardly used, and he could not find signs to prove that its use is common in colloquial English. For Givón and Yang (1994) the *get* passive is more frequent in working class American speakers. However, for Weiner and Labov (1983) its use is related to the age, sex and race; young people use it more than old people, and black people more than white one, and among them, men use the passive more than women. For this author, the little use of the *get* passive, in Great Britain, in the formal style within a circle of cultured people is only part of the process of rejection towards *get*, in favour of another more colloquial term. When people could decide between *be* and *get* they started using *get* in search of a less colloquial sense; however, many of the substitutions made nowadays are incorrect, as seen in example (89).

(91) War is being waged between X and Y. > War is getting waged
between X and Y (Downing 1996).

There are some criteria a *get* passive must follow: it must have an equivalent of *be* passive, it can only have an active form, and the clause with the *get* passive may have an agentive circumstance element in the shape of a *by* phrase:

(92) I was stung (by a wasp). A wasp stung me. I got stung (by a wasp).

There is a series of middle constructions like these ones which are excluded, such as *get acquainted*, *get engaged*, *get addicted*, *get stuck*, etc. The difference between *be* and *get* is also present in their origins. *Get* does not fulfil the requirements of an auxiliary, which include the behaviour of the auxiliary under negation, inversion, stranding by elimination of the verb, emphasis, position before a frequency adverb, position of quantifier, or the existential there. We can also observe some semantic characteristics given in literature to *get* and which are not present in the passive with *be*:

The passive voice

cause of action with meaning of result, tendency to be without agent, adverse or beneficial consequences from the fact expressed by the clause, responsibility and relation with the fact described, or an attitude from the speaker towards what has happened. Another extra difference (Downing, 1996) between *be* and *get* passives lies on the process the *get* passive develops, and which is basically from a material kind, where something is made or sent to the medium. On the contrary, the *be*+V-*en* construction is sometimes ambiguous between the material process and the attributive relational process. In what both constructions do coincide is in appearing in most cases without the agent. The *get* passive is not totally interchangeable with the *be* passive, despite the fact that verbs can be considered as intransitive and accept a *be* passive.

Another author who deals with the *get* passive is Peter Collins (1996). This author starts by making reference to other authors. Thus, he explains that for Lakoff (1971) the *get* passive implies the speaker's personal involvement, whereas the *be* passive offers more neutrality. Chappell (1980) is contrary to this opinion, and he thinks the *get* passive does not reflect the speaker's personal involvement, but their opinion.

Collins (1996) says that if we define the *get* passive only in terms of the presence of a form of *get* in combination with a past participle, we would discover that does not only have elements which are a problem to be included in this class, but also others which many do not agree with and very few would include them as members. There are *get* passives which are based on the fact that their potential is related to an equivalent active clause, something which can be seen in example (93) and (94).

(93) The carpet's loose there and my heel got caught.

(94) He got hit in the face with the tip of a surfboard.

With the presence of an agent phrase in example (96) we solve this criterion, while example (95) fulfils the criterion if we put the agent back.

(95) Let's get dressed up – the doctor's taking us out tonight.
(reflexive)

(96) That is the reason to want to get married. (reciprocal)

Collins (1996) also deals with adjectival passives with *get*. In these cases, their superficial shape is the only thing that makes us consider them as passives. They do not have any relation with an active construction, and they cannot be syntactically

transformed. This subclass is called ‘adjectival *get*-passive’, where its central members are adjectives and *get* is more a copula than a passive auxiliary. In order to compare it with the *be* passive, Collins (1996) presents several characteristics in favour of the *get* passive. Thus, the first thing he explains is that *get* is much more frequently used than *be* in constructions like *try to* or *manage to be / get*. *Get* cannot go with verbs taking finite complements, where the subject-referent has no control over the process itself. Its appearance with verbs denoting a process with any sense of improbability or impossibility is also improbable. In contrast with the *be* passive, the imperative has a higher possibility to use *get* instead of *be*. This author mentions that there are three types of variation in *get* passives, regional, stylistic, and diachronic, and therefore this kind of passives is subject to those variations in present-day English. Besides, many times these passives are associated to two types of pragmatic implication: the subject-referent is responsible for starting the process (determined in part by the meaning of *get*), and the subject-referent is attributed a sense of adversity or benefit (determined in part by the meaning of the past participle).

Another author, Curme (1947), says that due to the fact that progressive perfect and future passives are too clumsy, the progressive *get* passive was used instead. For Visser (1984), the *get* passive is a rival both for passival and progressive passives, since examples (97), (98) and (99) show the same aspect. (Hundt 2004: 100).

(97) the letter gets written

(98) the letter is writing

(99) letter is being written

About the same subject talks Scheffer (1975), who points out that the use of the progressive passive grows at the beginning of the 19th century and it is very frequent from the second quarter of the 19th century on; on the contrary, the passival was originated much earlier. Anyway, what most linguists agree is that the progressive passive was first used in the second half or last quarter of the 18th century.

Another author that writes on the auxiliary *get* to form passives is Denison (1993). He explains that most authorities agree with the OED, on that the first registered passive with *get* dates from the middle of the XVII, being that example (100)

(100) A certain Spanish pretending Alchymist...got acquainted with
foure rich Spanish merchants.

The passive voice

Likewise he mentions the generalisation made about the fact that the *get* passive is not a synonym or interchangeable with the *be* passive, and that the use of *get* is associated with a dynamic reading. *Get* used with an intransitive past participle would have a non passive reading. Most first examples which could be given of the *get* passive include the expression *get rid of* and other past participle forms which would be considered more as adjectives than passives. Stein (1979) maintains that with the use of *get* there is always a suggestion that the person or object designated by the subject has suffered a change with a lasting effect. He says that *get*, unlike passives, involves the fact that the object or person was on the state of being lost, hurt, etc. Semantically *get* expresses both the action and the resultative state. Moessner (1994) affirms that in Old English passive constructions were formed with two auxiliaries, *beon / wesian* and *weorþan*. This changed at the end of the Middle English period, when *weorþan* disappeared. Through Lakoff (1971) we see that periphrastic passives are not characteristic of Indo-European languages. In most languages the periphrastic passive is formed with the verb *to be*. In a few languages, like Gaelic, the passive may be formed with the verb *go*.

The use of a certain auxiliary verb in a language which has several of them, comes from semantic, syntactic and stylistic factors. In English the use of *be* and *get* is influenced by stylistic factors, being the *get* passive more typical in colloquial discourse. The use of this passive also depends on dialectal factors and the sociolect. According to Lakoff (1971), the *get* passive is frequently used to show the speaker's attitude towards the events described on the clause, while the *be* passive is much more neutral. Stein (1979) disagrees with this interpretation and he maintains that the clauses which form the *get* passive show the speaker's opinion about the event rather than making reference to an involvement of the sentential subject. Other authors have similar visions. Hatcher (1949) and Chappell (1980) say that *get* is used to describe events perceived as having consequences, either good or bad, for the subject:

(101) Kevin got rejected by another firm.

As for passive agents, not all sentences with *get* and past participle fit the definition of passive, as the following examples provided by Stein (1979: 49) illustrate:

(102) I was surprised at his getting married at all.

(103) She got lost.

These sentences not only differ in that it is not possible to include an agent in the clause, but also in the fact that there is no agent involved. They are active sentences, not passive ones.

As Siewierska (1984: 159) states, *be* passives in languages like English are similar to predicative sentences. And sometimes there is ambiguity between them, such as in the following ones:

(104) The glass is broken. // The glass is (regularly) broken by vandals.

(105) Mike was frightened. // Mike was frightened by her indiscisiveness.

This ambiguity has led many linguists to call these sentences *stative passives*. Following the definition of passive adopted for this work, under an adjective reading, they are not passives (Siewierska, 1984). Palmer (1987) also considers that the verb *get* is used in a very similar way to *be* in order to form passives:

(106) The child got killed by a car. // the child was killed by a car.

But this verb cannot substitute *be* every time, as seen in example (107):

(107) * The lesson got read by a choirboy (The lesson was read by a choirboy). (Palmer, 1987: 89)

Get gives the meaning of arriving to a state, and, frequently, *get + past participle* is considered a ‘statal passive’:

(108) The picture got broken. (Palmer, 1987: 89)

In these cases it has no agent, and it has it when it corresponds to an active:

(109) The children got punished by the teacher. (Palmer, 1987: 90)

From a stylistic point of view Palmer (1987), like Lakoff (1971), admits that the *get* passive is more frequent in colloquial than in formal language. Despite all the different explanations these authors give to equate *be* and *get* as auxiliaries of the passive voice, not everybody agrees, such as González & Pérez (2001: 671), who say that *get* cannot be considered as an auxiliary of the passive voice mainly because it cannot be freely placed with any verb or subject.

The passive voice

Apart from the auxiliary verbs used in the passive voice, in the analysis of the texts, the different verbs in the passive voice (the main verb of the passive structure) will also be taken into account, since the preference in the use of some verbs over others may be relevant when talking about scientific language.

Besides all these different views about the auxiliary used, the passive voice presents more problems, and treating historical phenomena related to the passive voice is also useful for the understanding and analysis.

3.6. Pragmatic interpretation

Beedham (1981:320) defends the idea that active and passive are not synonyms and that the meaning of passives is “the portrayal simultaneously of an event and the state which results from that event”. On his study of English passives, Beedham (1981) pays more attention to verbal aspects: perfect, progressive and passive. Thus, he explains that the passive has as synonym in one of the meanings of the perfect tense, that of result. Example (110) means the same as example (111):

(110) Freddy has broken the doll.

(111) The doll is now broken. (Beedham, 1981: 320)

We get another perspective of the passive voice through Parker(1976: 450) :

One speaker may assign a structural description (SD) to an utterance that is in some way different from the SD assigned by another speaker. If a speaker internalises a rule based on a ‘deviant’ SD, and the rule spreads, then the language will begin to show signs of change.

He explains that ‘miss-assignment of constituent structure’ is the name which should be given to this mechanism of change. For this author, this idea of change must be taken into account in the development of the auxiliary *be* in the history of the English language.

Another author who analyses the passive through the history of the English language is Seoane (2006). This author explains that the passive construction is a strategy to readjust information, which is an argument-reversing instrument where a

non-patient element may become the subject of the passive. As a topicalised instrument, the passive serves mainly for two purposes: it restores a new non-marked order of information in the clause, as in example (112), and it places the inherent topic noun phrase in a topic position, in example (113). Seoane (2006) explains that in earlier times the passive was not exclusively used to restore the structure of the non-marked information. What is more, this alternative readjustment of constituents comes from the wish of placing an agent in the marked position to give it emphasis; and also from the need to locate a topic inherent patient in a marked topic position. Such an adjustment of constituents is only possible through the passive, which is shown once more as an instrument of information organisation in certain periods.

(112) ([I spoke to John last Tuesday.] He said he had been betrayed
by Peter only a week earlier.

(113) John was chased by this car. (Seoane 2006)

We should take into account that not all languages work in the same way, moreover if they do not belong to the same family. In this study I am dealing with two different language families, Germanic and Celtic. The fact that some authors selected for the corpus may have a native language other than English is interesting, and that is the reason why the passive voice in Irish and Scottish languages are explained in the following two sections.

3.7. The passive voice in Irish

Since everything explained so far has been related to the passive voice in general, and the passive voice in English specifically, this section will be devoted to Gaelic Irish.

English and Irish are languages belonging to completely different families, and one of the main grammatical differences between them is that of word order pattern; English follows the pattern SVO (subject, verb, object), while in Irish the very strict order VSO is the main rule (Owens 1992, Nolan 2006, Doyle 2015). However, they share some typological features, as they are “grammatical word order languages” (Filppula, 1986: 58). This is helpful for the analysis, since the position of the different

The passive voice

constituents is used to encode the grammatical relations between the subject and the object, which is a basic principle in the definition of the passive voice.

Basically, all Celtic languages have an impersonal form for each tense, which has no person or number markers regarding the subject. Whereas this form may be often translated as a passive, the ending appears also with intransitive verbs. The presence of special verbal inflections for a non-specified subject is another Celtic feature.

In Irish the autonomous form of a verb only expresses the verbal action, without any mention to the agent (the subject), or any indication to the person or number:

(114) *Briseadh an fhuinneog* (The window was broken).

Autonomous constructions are syntactically equated to active clauses. In particular, the autonomous form of transitive verbs maintains the objects in the structure, being object pronouns in Breton and Irish. (Noonan, 1994)

The passive in Irish is formed morphologically (known as an autonomous form in Irish grammar), and it is a kind of impersonal passive, especially a kind without subject with verbal morphology. Historically too, the passive morphology derives from the marker of agreement in the third person, which is a common source for the impersonal passive morpheme. This structure is formed in a synthetic form, that is, in only one verbal form we have all the passive form, with no need of an auxiliary (as English does). Like in example (114) above, *briseadh* means *was broken* in its whole.

There is also a periphrastic construction to show passive in Irish, and a grammatical explanation here should be mentioned before dealing with it. Irish (as Spanish or Portuguese) has two verbs “to be”. The first one is the copula *is*, which generally talks about permanent states. The second one is called the substantive verb *tá*, which is used in the passive voice in Irish. (Nolan 2006, 2007). So, the periphrastic construction to be (*tá*) + verbal noun or verbal adjective is often considered as passive. This periphrastic construction does not have a consistent form and according to time and aspect the verbal phase slightly changes. Thus, example (115) implies a prepositional phrase, while (116) is a construction similar to that of English, that is, copula + past participle (Noonan, 1994: 280). In this sense, Molloy observes that “a verb is said to be passive when its past participle comes immediately after any part of the verb to be” (1867: 96).

(115) Bhí Seán á bhualadh (ag Liam) > John was being hit (by William).

(116) Tá mo t-obair na bhaile críochnaigh > My homework is finished. (Noonan, 1994: 280)

Some grammar books point out that the passive voice does not exist in Irish: “there is no way in Irish to say a thing is done by someone, as in the English passive” (Ó Sé & Sheils, 2001: 150), and then the active voice should be used to say who does something. When this periphrastic form is not considered as passive, then the morphological form is not a passive either. The morphological passive in Irish is a typical case of impersonal passive. This happens because those who described the grammar based their rational argument on the English grammar. Therefore, typologically speaking, the Irish language has no passive, that construction is a morphological structure. The periphrastic structure is not actually a passive on itself, but it is similar in its construction and known as ‘split ergative’.

The periphrastic passive in English makes often periphrastic constructions similar to passives in other languages where they are actual passives. This may alter details in the description of the language being dealt with (it happens in Irish). The periphrastic passive is less grammaticalized in comparison with the morphological one (Toyota, 2003). In Doyle’s words, “Modern Irish has a periphrastic passive, but no morphological marked one” (Doyle, 2001: 42) In the case of non periphrastic verbs, there is no passive in Irish; instead, there are impersonal forms, in all tenses and moods:

(117) Glantar an teach (clean-impers. the house) > Somebody cleans the house (Doyle, 2001: 43).

As Doyle (2001) shows, in Early Modern Irish it was common for the impersonal to be used with a prepositional phrase to express the agent, preceded by one of the following prepositions, ag ‘at’, le ‘with’, or ó ‘from’. This option is not valid nowadays, and a sentence like example (118) would be ungrammatical. However, the verbal form does exist in Irish, and it is used to say that something is done without specifying who does it, as in example (119).

(118) *Oladh an tae ag/le/ó Máire (drunk-impers.-past the tea at/with/from Mary) (Doyle, 2001: 80).

The passive voice

(119) Déantar an cháis se oar fheirm > This cheese is made on a farm (Ó Sé & Sheils, 2001: 149).

This is one of the main differences between the use of the passive in Irish and English; In Irish it is not normal to show the agent in the passive voice, instead the active voice must be used (Ó Sé & Sheils, 2001: 206). However, some authors point out that “it is possible to represent the agent by an adjunct adverbial phrase which is introduced by the preposition *ag*, ‘at’ (and less frequently by *ó*, ‘from’) (Ó Siadhail, 1989: 294).

When there is a transitive verb in a periphrastic construction with *le*, the structure must be interpreted as a passive in the cases when only one noun phrase occurs with it:

(120) Tá an leabhar léite agam. > I have the book read.

(121) Tá an leabhar léite. > The book is read. (Siadhail, 1989: 294)

It must also be taken into account that “there is no formal distinction between an intransitive verb in the active construction and a transitive verb in the agent –free passive construction” (Ó Siadhail, 1989: 299):

(122) Tá sé len imeacht. > He is to go off.

(123) Tá sé le n-ól. > It is to be drunk. (Ó Siadhail, 1989: 299)

It should be pointed out that in Modern Irish “all Irish verbs with the sole exception of the copula have an impersonal passive form”. (Nolan 2006: 145). And this form can occur in all tenses, and no matter if the verbs are transitive or intransitive.

There is also a third construction which could be a type of passive in Irish, the get-passive. “A get passive is not a syntactic passive in the same way that we understand a personal passive construction to be” (Nolan 2006: 159), and not all get constructions can be considered as get-passives. However, a particular subset of constructions, under strictly defined constraints, can be defined as get-passives. The verb to be used in these constructions is *faigh* (get), which is a transitive verb and has an impersonal passive form for each tense. It is not so widely used as the substantive verb (*tá*), but it is also present in the language:

(124) Fuair X bás. > X got killed.

The Irish language did not remain within the frontiers of the country, spreading to Scotland, but the evolution of Irish in this new territory was different. What concerns the passive voice will be the focus of the next section.

3.8. The passive voice in Scottish

In Chapter 1, when dealing with the different languages in Scotland, it seemed very clear that the authors selected would have learned and used only English for their writings. However, as we cannot be 100% sure of that, and that they had no influence of either Scottish Gaelic or Scots, a brief note on the passive voice in these two languages will be presented.

In the case of Scots, it is very easy to observe there will be no difference in the way of forming and using the passive voice. This language shares the vast majority of its grammar with the English language, even more in the eighteenth century, when there was practically no distinction between both languages (Corbett 1997), and the passive voice was one of these cases. Scots forms the passive voice like English, with the verb *to be* + the past participle of the verb, and in case of having an agent, with the preposition *by*, as seen in example (125).

(125) Janet McHardie wis bein led soon the guests like a prize heifer,
bi her faither, Jeems Cochrane (*Lady's Choice*, by Sheena
Blackhall).

In what regards Scottish Gaelic, as it happened in Irish, this language follows a verb-subject-object basic word order, and the verbal constructions may use synthetic (they are limited) or analytical forms. This language has two voices, which are traditionally called active and passive, but they are actually personal or active, and impersonal. As it happens in Irish, impersonals in Scottish Gaelic cannot highlight the theme or object, due to the word order of the language (Cornie 2012).

The passive voice in Scottish Gaelic is very similar to English. It does not share the synthetic form of Irish, and it can only be formed, like in English, with an auxiliary (verb *to be*) and the past participle of the verb. As already mentioned, in Gaelic (both Irish and Scottish), the verb *to be* has two different forms and meanings, and only one (not the copula but the substantive verb) can form the passive, as in example (126).

The passive voice

(126) Bha a' ghloinne brisde. > The glass was broken.

Following Reed (2008), we can see there are several different constructions within this scheme. The first one would be the Perfective Transitive Particle form, as is shown in examples (127) and (128) below:

(127) Bha a' ghloine air a brisdeadh. > The glass was broken.

(128) Bha a' ghloine air a brisdeadh le Iain. > The glass was broken by John.

The second one is the verbal adjective construction, also present in Irish:

(129) Tha a' gloinne air a brisde. > The glass was broken.

(130) Tha a' gloinne air a brisde le Iain. > The glass was broken by John.

The third case is that of a prepositional passive, which is actually a pseudopassive (see examples (131) and (132)).

(131) Bha an leabaidh seo air a cosg le George Washington. > This bed was used by George Washington.

(132) Bha an leabaidh seo air a cadal ann mar tha. > This bed was slept in already.

The last construction is the obligatory passive. Once in this point, something special about the passives in Scottish Gaelic deserves being mentioned. Apart from forming the passive with the so-called substantive verb *to be*, in Scottish Gaelic it is also possible to form it with the verb *to go*:

(133) Chaidh a' gloinne a brisdeadh. > The glass was broken.

The translation is exactly the same as the previous ones, although the verb is different, it is not translated with its own meaning. And this circumstance can also be seen in the example of the obligatory passive:

(134) Chaidh a sgaoladh gun do dh'fàhg e am baile. > It is rumoured that he left the town.

After all these explanations and examples, it seems clear that it would be very unlikely to find variations (not taking into account the verb *to be*) in the texts written by

Scottish authors in what makes reference to the construction of the passive voice, since the three languages (Scottish Gaelic, Scots and English) follow the same pattern.

In spite of the different perspectives and interpretations given by the multiple authors about the passive voice, only constructions under certain characteristics will be taking into account for the analysis in this work, and they will be explained in Chapter 5, when dealing with the analysis itself.

Once the passive voice has been treated, it is now the turn to focus on authors and texts.

CHAPTER 4. CORPUS MATERIAL

4.1. Introduction

As it was already explained in the introduction, the analysis of the passive voice for my dissertation is based on texts by different authors with diverse geographical origins (Ireland and Great Britain) and from different disciplines (Mathematics and History).

This chapter explains the reason to have chosen those texts and those authors. There is also a summary of the lives of each writer and a brief description of similarities and differences among them. The last section of the chapter deals with the concept of text-typology and its relevance for the present study.

4.2. Description of selected texts

After having presented several aspects of the passive voice from a theoretical point of view, it seems appropriate to apply that information to real texts. We should remember this is a corpus-based microanalysis of the ways the passive voice can be influenced by Irish when Irish writers use it in English. In order to analyse the different uses of the passive voice, I have selected a heterogeneous group of authors and texts. This selection consists of samples of texts from 32 authors which share some characteristics. All the works were published, for the first time, between 1725 and 1925,

Corpus material

being chosen in sets of 25 years (4 in every set), and they are samples of around 10,000 words per author, following one of the criterion established for those texts included in the *Coruña Corpus* (Crespo & Moskowich 2020). Some authors, and consequently some sub-corpora, have a higher number of words because in some cases, when the texts were very short, it was necessary to collect more than one text²⁰, and thus, the number of words is different. Following Crespo and Moskowich (2009), those texts shorter than 10,000 words have been included *in toto*. Figures in the different sub-corpora vary considerably, so in order to obtain a more accurate result when analysing the texts I have normalised them to 10,000 words, since they are relatively small corpora (normalising to 1,000 words would give figures too small). Half of the authors are Irish, and half British, and half of the texts belong to the field of Mathematics, the other half to History. Thus, comparison between different disciplines, and between the two “different cultures” presented in previous chapters is possible.

The following tables show the 32 authors with their works, their origin and the number of words selected for each sample.

PERIOD	IRELAND	WORDS	GREAT BRITAIN	WORDS
1725-1750	1734. George Berkeley: <i>The Analyst</i>	12,530	1730. Alexander Malcolm: <i>A new system of arithmetick theoretical and practical</i>	10,722
1750-1775	1775. Joseph Fenn: <i>A new and complete system of algebra; or, Specious arithmetic. Comprehending all the fundamental rules and operations of that science</i>	10,004	1765. Benjamin Donne: <i>The accountant and geometrician: containing the doctrine of circulating decimals, logarithms, book-keeping and plane geometry</i>	10,159
1775-1800	1786. Rev. Matthew Young: <i>A synthetical demonstration of the rule for the quadrature of simple curves, in the Analysis per Equationes terminorum numero infinitas /</i> 1798. <i>On the Force of Testimony in establishing facts contrary to Analogy.</i>	10,553	1788. John Hellins: <i>Mathematical Essays</i>	10,478
1800-1825	1817. Robert Adrain: <i>Investigation of the figure of the Earth and of the Gravity in different latitudes /</i> 1818. <i>The Mean diameter of the Earth</i>	10,790	1811. Peter Barlow: <i>An elementary investigation of the theory of numbers, with its application to the indeterminate and Diophantine analysis, the analytical and geometrical division of the circle, and several other curious algebraical and arithmetical problems</i>	10,037
1825-1850	1828. Sir William Rowan Hamilton: <i>Theory of the system of rays</i>	10,648	1828. George Green: <i>Application of the preceding results to the theory of electricity</i>	10,293
1850-1875	1852. George Salmon: <i>treatise on the higher plane curves</i>	11,897	1872. Charles Taylor: <i>The geometry of conics</i>	10,747

²⁰ Some texts with a high number of words appear under one single title, but actually they form a compendium of texts under one title, and that is the reason why words go over 10,000.

1875-1900	1878. Henry John Stephen Smith: <i>Arithmetical notes /</i> 1878. <i>On the singularities of the Modular Equations and Curves</i>	12,386	1886. Alfred George Greenhill: <i>Differential and Integral Calculus, with applications</i>	10,741
1900-1925	1907-8. Francis Ysidro Edgeworth: <i>Appreciations of Mathematical Theories</i> 1910. <i>Applicatons of probabilities to economics. Part I & Part II</i>	10,650	1907. William Sealy Gosset (Student): <i>On the Error of Counting with a haemacytometer</i> 1908. <i>The probable Error of a Mean</i> 1908. <i>Probable Error of a Correlation Coefficient</i> 1909. <i>The Distribution of the Means of Samples which are not drawn at random</i>	10,998

Table 4: Mathematics: authors and texts

PERIOD	IRELAND	WORDS	GREAT BRITAIN	WORDS
1725-1750	1747. Walter Harris: <i>The history of the life and reign of William-Henry, Prince of Nassau and orange, Stadholder of the United Provinces, King of England, Scotland, France and Ireland, &c.</i>	12,015	1740. John Bancks: <i>The history of the life and reign of the Czar Peter the Great Emperor of All Russia And Father of his Country in India</i>	10,084
1750-1775	1774. Thomas Leland: <i>The history of Ireland from the invasion of Henry II. With a preliminary discourse on the ancient state of that kingdom</i>	11,580	1760. Thomas Birch: <i>The life of Henry Prince of Wales, eldest son of King James I</i>	10,048
1775-1800	1800. Joseph Stock: <i>A narrative of what passes at Killalla, in the County of Mayo, and the parts adjacent, during the French invasion in the summer of 1798</i>	10,182	1795. John Adams: <i>A view of universal history, from the creation to the present time</i>	10,120
1800-1825	1820. James Hardiman: <i>History of the Town and County of Galway</i>	10,259	1820. Maria Graham (Lady Maria Callcott): <i>Memoirs of the life of Nicholas Poussin</i>	10,061
1825-1850	1839. George Petrie: <i>On the History and Antiquities of Tara Hill</i>	10,117	1833. Lucy Aikin: <i>Memoirs of the Court of King Charles the First. In two volumes. Vol. I</i>	10,022
1850-1875	1875. Mary Frances Cusack: <i>A History of the City and County of Cork</i>	10,023	1860. Martha Walker Freer: <i>History of the reign of Henry IV. King of France and Navarre</i>	10,102
1875-1900	1878. Standish O'Grady: <i>History of Ireland</i>	10,580	1895. Montagu Burrows: <i>The history of the Foreign Policy of Great Britain</i>	10,188
1900-1925	1911. Goddard Henry Orpen: <i>Ireland under the Normans, 1169-1216</i>	15,120	1903. Samuel Rawson Gardiner: <i>History of the Commonwealth and Protectorate, 1649-1660</i>	12,850

Table 5: History: authors and texts

In order to choose the authors and texts selected, I have made use of the *Coruña Corpus (CC): A Collection of Samples of English Scientific Writing* (CC, henceforth). This corpus is formed by different sub-corpora according to the disciplines the texts deal with, which follow the same characteristics and criteria. As described in Crespo and Moskowich (2009), some of the criteria include texts containing around 10,000 words, they are first editions, and are written by authors whose mother tongue is

Corpus material

English. I have altered some of the criteria to form my own corpus and to adapt it to the requirements needed for the analysis, as explained below.

Besides, not all the texts selected for my corpus have been taken from the CC, since they did not fulfil all my requirements. In this sense, approximately half of the texts from the sub-corpus of History belong to CHET, *Corpus of History English Texts* (Moskowich et al. 2019). This corpus includes texts by English-speaking authors from 1700 to 1900; however, I had to include some more authors, since I needed two sub-corpora, one with British authors, and one with Irish authors, and I could not find them all in CHET. Moreover, my corpus starts in 1725 and finishes in 1925. The reason for this alteration of years, being two centuries anyway, was due to the difficulty in finding some texts from the very beginning of the eighteenth century that fulfil the required criteria, especially in the Mathematics sub-corpus.

Another difference of criteria is the fact that the CC includes two texts per decade in every discipline, while I have chosen one text every 25 years (or two if the 10,000 words were not reached with only one). The reason for doing this is explained in Kytö et al. (2000), where they state that a period of around 30 years is enough to study the linguistic change. By doing this, it was possible to choose more than one text of the same author when the words were under 10,000, as long as both texts were published within the same period of 25 years.

In the case of the texts on mathematical topics, some of the samples have been taken from an early, and unfinished, version of a corpus of mathematics texts from the CC. As it was explained for my History corpus, other texts have been included to fulfil the requirements for the analysis. Nevertheless, the selection of new texts has been made so that all the compilation criteria for the analysis had been met, following those included in the CC, as can be seen above.

The fact that texts are the basic source of analysis in this study cannot be discussed. However, the authors of those texts play also a relevant role, especially in a sociolinguistic framework. As López Orellana (2012) points out, scientists adapt their discourse to the requirements of the scientific activity (writing in this case) and show their own personal way when structuring language. So, these authors leave their mark in their works, and thus it is necessary to know some details about their personal life and work before focusing on the texts.

4.2.1. Some information on text typology and register

Text-types can also be a variable to analyse related to the use of the scientific register; but for my purpose, to find any possible interference in the English used in Ireland in scientific texts, it does not seem very relevant. However, since all the texts share the scientific nature, I find appropriate to relate the texts with information about them, such as text-typology and register.

The following paragraphs show a short introduction to this issue, since it is well-known the fact that these are highly arguable concepts.

As seen in Chapter 2 when dealing with the scientific discourse, it is important for a reader to know the type of text he/she is facing before reading it. There are several markers which can help to know the kind of text it is, such as a heading in a letter or formula. However, these markers are not enough since not all texts, or authors, follow the same criteria, and not all markers are exclusive of a single text-type. Even reading a text cannot be definitive. The purpose of a text may be helpful, but we can find lots of text types which may share that same purpose. This leads us to think, as Görlach (2004: 102) once did, that “we have never got close to understanding which or how many text types are in a particular culture nor with what distinctive features they can be delimited from each other.”

The purpose of a text, or its function, as Vilamovo & Sánchez (1994) point out, is the main factor to define a text. However, it is not the only one, since the same purpose can be shared by many different texts. It is necessary to follow some other criteria, such as the sender and recipient, specific textual characteristics or specific contexts. For instance, a scientific text will require the sender to be a scientist, and the recipient anyone interested in acquiring knowledge about the subject, provided that their basics on the issue are enough to understand what the text says. The textual characteristics will be those assigned to scientific texts. And the specific contexts will depend on the text chosen, not shared with any other text.

In order to make a clearer distinction between texts, we can focus on the sender, since some types of texts require a specific one, “la *encíclica* debe tener como emisor a un papa; una *ley*, al gobierno; una *orden*, a un superior; un *certificado*; a alguien

competente para certificar; un *testamento*, al poseedor de los bienes” (Vilarnovo & Sánchez, 1994: 56), or even a recipient, “la *encíclica*, la *constitución dogmática*, etc., exigen un receptor concreto: la Iglesia universal. Una *lección* exige a un “alumno” (al menos potencial); un *pésame*, al familiar de un difunto” (Vilarnovo & Sánchez, 1994: 57)

The key aspect is getting to know the exact definition of a text type. There are many authors who have tried to define *text type*, and also many the difficulties in finding a suitable definition. One of the multiple definitions is the one given by Görlach (2004: 105):

A text type is a specific linguistic pattern in which formal/structural characteristics have been conventionalized in a specific culture for certain well-defined and standardized uses of language so that a speaker/hearer or writer/reader can judge:

- a) the correct use of linguistic features obligatory or expected in a specific text type;
- b) the adequate use of the formula with regard to topic, situation, addressee, medium, register, etc.;
- c) the identification of intentionally or inadvertently mixed types, or their misuse;
- d) the designation of the text type.

However, it is not so easy to identify a text type, there are some problems of delimitation. For instance, the features which are necessary to define a specific category are not text types themselves; text types can be ‘bound’ or ‘free’, as morphemes can; geographic and chronological distinctions can be significant, at least in the emergence of national types; it may or may not exist equivalence of text types across linguistic and cultural boundaries; and “it is to be expected that certain text types exhibit greater formal homogeneity, and historically a more consistent development towards structural rigidity than others do.” (Görlach 2004: 107-108) Besides, as Vilarnovo (1993: 24) points out, “otra realidad que se comprueba es la del cambio y evolución de los tipos de texto a través de la historia.” All this makes very hard to define and identify a specific text type.

Apart from the text type, we also have to take into account the kind of *register* employed. As Ferguson (1994: 16) says,

people speak differently depending on whether they are addressing someone older or younger, of the same sex or opposite sex, of the same or higher or lower status, and so on; whether they are participating in a religious ritual, a sports event, or a courtroom scene.

Thus, when a mathematician, for instance, writes down his ideas or explanations, he is not addressing to any kind of audience – as we have already seen in the type of recipient it required; if he had to explain the same thing to a group of teenagers, his expressions and the language used would be different, his vocabulary would be different, and he would have to explain concepts this audience is not familiarised with, instead of assuming they already know what he is talking about.

The choice of a certain way of communication or other, that is, the register employed, will depend on each person, what their common sense tells them will influence the choice. The problem is, as de Beaugrande (1993: 23) remarks, that “society itself has no exact criteria for deciding what the necessary and sufficient conditions of a register must be.” Without these conditions, we can only make an approximation to a register, we will probably think we are using a register properly, but we will be mixing characteristics from more than one register. What characterises registers, at least in English, is mainly vocabulary, although we cannot forget that grammar also plays an important role in this delimitation. We do not use the same kind of words when we talk about football, or when we are dealing with a scientific experiment, or in a cooking session. We adapt our vocabulary to the different fields and activities we perform.

Something similar to what happened with the definition of text type can be seen when dealing with register. There are many different definitions for this variety of language, and some of them are here reflected. Thus, Ferguson (1994: 20) explains that: “A communication situation that recurs regularly in a society will tend over time to develop identifying markers of language structure and language use, different from the language of other communication situations.”

For de Beaugrande (1993: 18), “a ‘register’ is essentially a set of beliefs, attitudes or expectations about what is or is not likely to seem appropriate and be selected in certain kinds of contexts.” Meanwhile, Trudgill (1992: 62) defines it as “A

technical term from sociolinguistics which is used to describe a language variety that is associated with a particular topic, subject or activity.”

Another different vision of this term is that given by Mathiessen (1993: 221), who says that “‘register’ is not a ‘component’ of discourse, conversation, ethnographic setting or any other similar construct; it is an aspect of a separate dimension of organisation, that of functional variation.” He also explains that “from the point of view of language, register is a state of variation of the linguistic system – it is a functional variety of language.” (1993: 282)

It is not that registers serve to say the same things in different ways, or the same way of saying different things; “registers [...] are ways of saying different things. Prototypically, therefore, they differ in content. The features that go together in a register go together for semantic reasons” (Halliday 2002: 169). A register is not a language unit, and it has not been always something really important, at least in its label and usage, since, as Beaugrande (1993: 7) tells us, “the term itself is not used at all in early foundational works”. And actually, the same happens with other terms, “The concept of text types is a fairly recent addition to the instrumentarium of synchronic and historical linguistics.” (Görlach 2004: 102)

Another term which is sometimes used as an equivalent to register is *style*. It is frequently used to differentiate texts internally, without paying attention to the topic, by the presence or absence of certain structures and lexical characteristics. It is also used as part of register, or even as variation within particular genres or registers (Ferguson 1994). This leads us to a new term, *genre*. Ferguson (1994: 21)’s words speaking about genre are the following: “A message type that recurs regularly in a community will tend over time to develop an identifying internal structure, differentiated from other message types in the repertoire of the community.”

One of the problems Vilamovo & Sánchez (1994: 22-23) point out when defining texts is “el distinto nivel de realización de los tipos, que lleva a un uso desigual de los términos *género* o *tipo*” This problem has been frequently checked by expert linguists, and may lead to a confusion and a misunderstanding of terms.

Some authors have considered that “genres form an open-ended set” (Trosbor 1997b: 15), that is, we can add genres without any limit; but we cannot do the same with text types, they “constitute a closed set with only a limited number of categories”,

we cannot invent new text types because they are already defined by a set of characteristics.

Another way we have to distinguish between these two concepts is considering that *genre* is based on external and non-linguistic characteristics, whereas the criteria on which text type is based are linguistic and internal characteristics of texts. That is to say, that a genre depends on what happens around the text, but a text type is defined as to be so depending on what occurs inside the text itself.

Nevertheless, to this confusion of terms, we can add another one; *genre* and *register* are hard-to-delimit concepts. There is more than one way of differentiating these two elements, and, of course, many more discrepancies about this delimitation. One differentiation between the two is that genres deal with the whole text, and registers treat with the internal structure of the texts, and that is why they exist without dependence on the text-level structures. When we talk about *register*, we are thinking on the organisation of the context, whereas “*genre* tends to be associated more with the organisation of culture and social purposes around language” (Lee 2001: 42). Whether we deal with vocabulary, grammar or semantics, we are making reference to the term register. On the contrary, *genre* is employed for categories related to a recognisable culture.

As we have already noted, the term *register* is used when we want to focus on the language itself; it is well-known that different situations require different ways of using the language, as we have already pointed out earlier, and it is then that we introduce the concept *register*. However, *genre* cannot be applied to the same circumstances; if we think of a text as part of a category, a member of a group already identifiable by a culture due to its well-defined characteristics, we are talking about a *genre*. A *genre* can change according to the different cultures existing in the planet; alongside the history, there are conventions which may make changes in a *genre*, either in a perceptible or imperceptible way. Registers do not depend on culture and on its defined conventions and rules.

But if the term *type* may be confused with *genre*, the term *text* can also be confused, in this case with *discourse*. “First, one often talks of *written text* versus *spoken discourse*.” (Stubbs 1983: 9) A discourse usually implies an interaction between two parts; whereas what a text implies is non-interaction, it is not necessary to have an audience when a text is being created, it does not matter if its purpose is to be read

aloud or not. Besides, the length also plays an important role. A text may be very short, but a discourse needs to have a considerable length. The problem with these two terms may arise from the existence of what is called *discourse analysis*. Trudgill (1992: 27) defines it as “a branch of linguistics which deals with linguistic units at levels above the sentence, i.e. texts and conversations”. Here we can see that texts are included in this section of linguistics, and that leads to confusion and ambiguity when trying to make a delimitation between a discourse and a text, since people will tend to consider both elements to be equivalent. It is necessary to remark the fact that it is not the same to talk about discourse and discourse analysis. The latter does not only deal with discourses, “discourse analysis is used to refer both to the study of language above the sentence (more accurately, above the clause), and also to the study of naturally occurring language” (Stubbs 1983: 10).

Different authors give different approaches taken towards the discourse analysis; thus Drid (2010) speaks about two approaches, the formal and the functional. In the first one the language is explored with the focus on those pieces larger than the sentences, while in the second approach the relations between sentences are not as important as the use of the language itself.

Schiffin et al. (2003) also share these two approaches, but they offer one more, that which includes non-linguistic and non-specific instances of language in the social practice. In this sense the analysis can go beyond the text and the social situation may play a role on it.

These three approaches can become four according to Wetherell (2001), being the first one that considering the language as a system where different patterns can be found; the second approach would consider the language as an activity, where the interaction between different elements in it can be analysed. The third approach would cover the analysis of the different patterns of the language restricted to a specific topic or purpose; and the fourth one would be that explained by Schiffin et al. (2003) focused on a society or even a specific culture.

The situation exposed by Hodges et al. (2008) is different, since their approaches get mixed with the different fields created by the main schools Hernández-Guerra (2014) explains. Hodges et al (2008) delve into three different approaches, the formal linguistic discourse analysis, the empirical discourse analysis, and the critical discourse analysis. For them, the first one “involves a structured analysis of text in

order to find general underlying rules of linguistic or communicative function behind the text” (Hodges et al. 2008: 570); this approach corresponds to the formal one stated by Drid (2010) and Schriffin et al. (2003). The second approach, the empirical one, is based on function of language in action and genre analysis, giving more importance to sociological uses of the language than to grammar or linguistic structures. In this case, this approach would correspond to the third one given by Schriffin et al. (2003).

Up to this point there is no problem or mixture with the fields of study. However, the third approach is critical discourse analysis. In this approach the analysis “involves not only the examination of text and the social uses of language, but also the study of the ways in which the very existence of specific institutions and of roles for individuals to play are made possible by ways of thinking and speaking” (Hodges et al. 2008: 570). This critical discourse analysis is one of the nine fields of study mentioned by Hernández-Guerra (2014), where ideologies are taken into account in a text.

The other fields of study pointed out by Hernández-Guerra are pragmatics, interactional sociolinguistics, conversational analysis, the ethnography of communication, sociolinguistic variation analysis, functional sentence perspective, post-structuralist theory and social theory, and mediated discourse analysis, each of them concentrating and basing their analysis of the language on different considerations, such as context, social interaction or purpose.

My study is centred on the language used by certain authors according to different variables, mainly place of origin and discipline. In what makes reference to their place of origin it is worth mentioning that not only the place itself is relevant. The history behind each place, culture and language as well as the social situation at the time the authors lived is very important to understand their writing. As López Orellana (2012: 84) points out, “when the scientist personalises his writing by going beyond the discourse, he uses metadiscourse, which is the linguistic and rhetorical manifestation of an author’s presence in a text”. Authors include in their writings the society around them, and that is why a sociolinguistic approach will be taken in order to analyse the texts. A sociolinguistic variation analysis is essential in this case in order to make an accurate comparison and obtain concise results.

4.3. Authors of scientific texts

The criteria for authors to be considered from one nationality or another are mainly based on the country where they were grown up or educated, but where they learnt to speak and communicate, that is, where they acquired their linguistic habits. Thus, we have examples like Henry John Stephen Smith, who graduated at Oxford, but was born and grew up in Ireland and we consider him Irish; or William Sealy Gosset, who was well-known for working in the Guinness brewery at Dublin, but who was born and educated in England.

The information about some authors is not very clear and part of the data about where they were born or educated is missing (such as Peter Barlow or Walter Harris), but their nationality is clear and accepted by everybody.

Within the same nationality I have chosen authors from different parts of the country. So, in Ireland, we have people from counties such as Dublin, Mayo, Longford, or Antrim (nowadays UK, but part of the island of Ireland, and with no political division at the time of production of the texts). The British authors come from Scotland (Aberdeen, Edinburgh), London, Berkshire, or Nottinghamshire, for example.

I have tried to obtain a wide variety of authors, not only in what makes reference to their origin, but also about their education. In this sense, some authors were educated at school and university, such as Hamilton, Salmon, Gosset, or Greenhill, and others were educated at home and/or did not attend university, as happened with Green or Aikin. And we have also several women among the selection. Besides, not all the authors dedicated their lives to the discipline the texts talk about. This is the case of Berkeley, who had a PhD in Theology and used to talk about philosophy; or Salmon, who changed from mathematics to devote his life to theology. Others, like Mary Francis Cusack, had not only one subject, and she wrote about several topics, from “Irish history and biography including many pious and religious texts” to “letters highlighting Irish distress and injustice” in the press (Morrin, 2017); or Matthew Young, writing on algebra, optics or hydrodynamics, but also on Gaelic poetry (Leany, 2020)

Many of the authors were related to the church, from those who had chosen this way because of events in their lives (Mary Francis Cusack, the nun of Kenmare, entered the church after the death of her fiancé), to those who had university studies. The reason

for the latter was that “the main subjects cultivated at Oxford”, as well as in other universities on the isles, “in the first half of the nineteenth century were classics and theology” (Gow, 2000b: 65)

4.3.1. Author biographies

In order to offer an overview of these authors, a brief introduction to their lives is given. The order followed is neither alphabetical nor chronological; authors appear following Tables 4 and 5 above, first Mathematics and then History.

- **George Berkeley.** He was born in 1685 in Dysert, co. Clare (Ireland), and was educated at Kilkenny College and then Trinity College, in Dublin, where he got a position as teacher of Greek. In 1710 he was ordained in the Anglican Church, and obtained his PhD in theology in 1721, turning to teach Theology and Hebrew. In 1724 he became Dean in Derry. After travelling around the world for different purposes (Bermuda, Rhode Island, London), he returned to Ireland and was made Bishop of Cloyne, where he died in 1753, co. Cork. Several places in the world were named after him (University of Berkeley in California, student housing at the University of Yale, or the library of Trinity College in Dublin).
- **Joseph Fenn.** Very little is known about him, although it is considered as an “Irish Mathematics master” (Swetz 2016). He was born in Ireland, but attended University in the continent, where he was professor of philosophy in the University of Nantes. He had “a fine disregard to national feelings” (Schrader 2013: 176). His work on algebra is considered as one of the first modern algebra texts.
- **Rev. Matthew Young.** He was born in 1750 in Castlerea, Co. Roscommon (Ireland), and was educated at the school of Abraham Schackleton at Ballitore, Co. Kildare until one of his elder brothers, curate in Cavan, took him to prepare him for college. He entered Trinity College Dublin in 1766, where he graduated BA in 1772, and MA in 1774, obtaining a fellowship in 1775. In 1786 he obtained the degree of D.D. (Doctor of Divinity) and he was elected professor of natural philosophy in Trinity College. In 1777 he founded a society in the university for the study of Syriac and theology, the Neophilosophers, and also a

philosophical society, the Palaeosophers, being this the germ of the Royal Irish Academy. In 1790 he published a pamphlet against the power of the provost John Hely-Hutchinson, and despite the controversy it caused, he was appointed bishop of Clonfert in 1798. He published several papers mainly on scientific subjects, such as algebra, optics or hydrodynamics, but also on Gaelic poetry, since he had a deep interest in Irish literature. He catalogued the Irish manuscripts in Trinity College Dublin, and he published translations of an ancient Irish manuscript containing historical tracts and several genealogies, being this the first work in Gaelic scholarship to be produced under the Royal Irish Academy's patronage. He died in 1800 in Lancashire, England (UK), being his body brought back to Ireland and buried in the chapel of Trinity College Dublin.

- **Robert Adrain.** He was born in 1775 in Carrickfergus, co. Antrim (Ireland), where he grew up until the age of 23 when he moved to New Jersey (USA). He dedicated his life to mathematics, teaching in schools. He was also president of the York County Academy for 5 years, and editor and contributor to the *Mathematical Correspondent*, the first mathematical journal in the United States, and founded two journals (*The Analyst, or Mathematical Museum*, and *The Mathematical Diary*). He died in 1843 in New Jersey (USA).
- **Sir William Rowan Hamilton.** He was born in 1805 in Dublin. When he was three years old, he was sent to Trim, in County Meath, to live with his uncle, who ran a school. He was very good at languages, but he changed to mathematics when he was ten, due to a mental arithmetic contest. And he studied classics and mathematics at Trinity College, in Dublin, and in 1827 he was appointed Professor of Astronomy, even before graduating. He won twice the Cunningham Medal of the Royal Irish Academy, in 1834 and 1835. In 1835 he was knighted. Other merits include being president of the Royal Irish Academy (1837-1846), a corresponding member of the Saint Petersburg Academy of Sciences, first Foreign Associate of the United National Academy of Sciences. His name is on the Hamilton Institute at the National University of Ireland, Maynooth, and there is an annual public Hamilton lecture at the Royal Irish Academy. He died in 1865 in Dublin. On the 200th anniversary of his birth, in 2005, the Irish government designated "the Hamilton Year, celebrating

Irish science”, and Trinity College Dublin launched the Hamilton Mathematics Institute. The Central Bank of Ireland also issued a commemorative coin in his honour.

- **George Salmon.** He was born in 1819 in Dublin (Ireland), but he grew up in Cork City, until 1833 when he entered Trinity College, and there he stayed for the rest of his career, first teaching mathematics and then theology. He was ordained a deacon in 1844, and priest in the Church of Ireland in 1845. He was awarded several medals related to mathematics before resigning his position in the mathematical department at the university, and accepting a post of chancellor at St. Patrick’s Cathedral in Dublin. In 1866 he was elected Regius Professor of Divinity at Trinity College in Dublin, and in 1888 he was named Provost at the same university, where he died in 1904.
- **Henry John Stephen Smith.** He was born in Dublin (Ireland) in 1826. Although as a child he lived in several places in England, after the death of his father, he did not attend school, he was educated by his own mother and then by private tutors. He then went to Balliol College, in Oxford, and spent some time studying in the Sorbonne in Paris. He worked in different academic institutions, such as Balliol College, Corpus Christi College, Oxford University Museum, the University of London, or the London Mathematical Society. He died in Oxford.
- **Francis Ysidro Edgeworth.** He was born in 1845 in Edgeworthstown, co. Longford (Ireland), where he was educated by private tutors until he entered university in 1862, attending Trinity College in Dublin and Balliol College in Oxford, studying ancient and modern languages (He also studied mathematics and economics on its own). Although he was qualified as a barrister in London, he never practised. In 1880 he became a lecturer in logic at King’s College London, then, in 1888, he was appointed to a chair in economics, and three years later Drummond Professor of Political Economy at Oxford University. He was Fellow of All Souls College until his retirement in 1922. Among others, he was a President of the Royal Statistical Society, Vice-President of the Royal Economic Society, and a Fellow of the British Academy. Besides he was the first Editor of the *Economic Journal*, and was editor until 1926, when he died in Oxford.

- **Alexander Malcolm.** He was born in Edinburgh (Scotland) in 1685 and nothing is known about his education. All we know is that he established himself as a teacher of mathematics at an early age. He migrated to America, where he established as a master of grammar school. He was also rector of Saint Michael's Church, in Massachusetts, rector of St Anne's Parish Church, Maryland, and master of the Free School at Maryland, post he resigned a few years later. He died in 1763.
- **Benjamin Donne.** He was born in 1729 in Bideford, Devon (England), where he was educated. His surname can be spelt Donn or Donne, as he explained in one of his works in 1789 that he had added an E to his name. In 1768 he was elected librarian of the British Academy, but as he had little work, he started an academy at Bristol, where he stayed until 1775, when he established himself in Kingston. He dedicated his life to the field of mathematics, becoming also a teacher on that subject. In the 1790s he was appointed master of mechanics to the king. He died in 1798.
- **John Hellins.** This author was born around 1749 in Devon (England), where he was educated to be a cooper, although he later became a schoolteacher and in 1773 he was assistant of Nevil Maskelyne, the Astronomer Royal. After that, he became a clergyman, being curate at Constantine, Herriar between 1779 and 1783, and later at Greens Norton. He entered Trinity College, Cambridge, graduating in 1800. He founded the village school in Potterspurty, and nowadays the John Hellins Primary School bears his name. He worked in the mathematical and astronomical field, and he became Fellow of the Royal Society in 1796. He died in 1827 in Potterspurty, Northamptonshire (England).
- **Peter Barlow.** He was born in 1776 in Norwich, Norfolk (England). In 1801 he was appointed assistant mathematics master at the Royal Academy at Woolwich, where he remained until 1847. He became a fellow of the Royal Society in 1823, and in 1825 he received the Copley Medal for his work. In 1832 he was elected Honorary Member of the American Academy of Arts and Sciences. He died in 1862 in Kent (England).
- **George Green.** It was 1793 when George Green was born in Sneinton, Nottinghamshire (England). He only attended a school for one year in 1801, when his father enrolled him at Robert Goodacre's Academy, due to his average

intellect. When he was thirty, he became a member of the Nottingham Subscription Library, which was exclusive to a hundred or so subscribers. And in 1832, aged nearly forty, he started his university studies at Gonville and Caius College, Cambridge, graduating in 1838. After this, he was elected a fellow of the Cambridge Philosophical Society. He died in Nottingham (England) in 1841 following a disease. The George Green Library at the University of Nottingham is named after him, as well as The George Green Institute for Electromagnetics Research, at the same university. There is a memorial stone for him at Westminster Abbey.

- **Charles Taylor.** He was born in 1840 in London. When he was five he moved to Hampstead after the death of his father, and there he attended the grammar school of St. Marylebone and All Souls, and King's College School afterwards. In 1858 he entered St. John's College, Cambridge, studying mathematics. He was one of the founders of the "Oxford, Cambridge, and Dublin Messenger of Mathematics", and was editor from 1862 to 1884. In 1872 he joined the London Mathematical Society, and he was president of the Mathematical Association in 1892. He was ordained deacon in 1866 and priest in 1867. In 1873 he was appointed college lecture in theology, and moved to be a Hebrew scholar. In 1886 he received an honorary degree by Harvard, Cambridge, USA. He died in 1908 in Nuremberg (Germany), although he was buried in Cambridge.
- **Alfred George Greenhill.** He was born in 1847 in London, and educated in Christ's Hospital and St. John's College, in Cambridge. He taught Mathematics at The Artillery College, in Woolwich. He died in 1927 in London.
- **William Sealy Gosset (Student).** He was born in Canterbury, Kent (England) in 1876. He attended Winchester College and then he studied Chemistry and Mathematics in New College, Oxford. After graduating he started working (as a mathematician) at the Guinness Brewery in Dublin, where he got the name of Student, since he could not use his own name to publish his work due to a confidential agreement he had with the company. He died in 1937 in Beaconsfield, Buckinghamshire (England).
- **Walter Harris.** He was born in 1686 in Mountmellick, co. Laois (Ireland). He was educated at Kilkenny College and then Trinity College in Dublin. In 1716

he became vicar-general to the Archbishop of Meath. In the 1740s he was involved with the Physico-Historical Society. He died in 1761 in Dublin.

- **Thomas Leland.** He was born in Dublin in 1722 and educated at Thomas Sheridan's school and then at Trinity College, becoming Professor of Oratory. He dealt with history and translations, at the same time he was ordained priest from the Church of Ireland in 1748. He was even Vicar of St. Ann's Church in Dublin. He died in 1785 in Dublin.
- **Joseph Stock.** He was born in 1740 in Dublin, where he was educated, first at Mr Gast's school and then at Trinity College. He graduated in 1761 and gained a fellowship in 1763. In 1798 he was named bishop of Killala, and sent to the diocese of Waterford and Lismore in 1810. He died in 1813 in Waterford.
- **James Hardiman.** He was born in 1782 in Westport, County Mayo, and he was also known as Séamus Ó hArgadáin (his name in Irish). He trained to be a lawyer, and he was a member of the Royal Irish Academy. In 1855 he became librarian of Queen's College, in Galway. The university library was later named in his honour. He died in Galway in 1855.
- **George Petrie.** He was born in Dublin in 1790. He was educated as an artist at the Dublin Society's Schools. He was part of the Royal Irish Academy in the 1820s and 1830s. He worked as head of the Topographical Department of the Irish Ordnance Survey from 1833 to 1843. He was also the editor of the "Dublin Penny Journal" and the "Irish Penny Journal", two antiquarian magazines. He won the Cunningham Medal, given by the Royal Irish Academy, three times, in 1831, 1834 and 1839. He died in 1866 in Dublin.
- **Mary Francis Cusack.** She was born in 1829 in Coolock, co. Dublin under the name of Margaret Anna Cusack, but she was also known as Mary Francis Cusack or Mary Frances Cusack. As a teenager she moved to Exeter, after her parents separated, and later she moved to Devon, where she joined the evangelical Christian Plymouth Brethren after the death of her fiancé. But when she was 29, she entered the Catholic Church and joined the Poor Clares in Newry, County Down. In 1861 she was sent to Kenmare, County Kerry to establish a convent, and then she was known as the "Nun of Kenmare". She stayed there until 1881, when she moved to Knock, County Mayo to establish a

new convent. She had some problems, and she finally went to the Diocese of Nottingham in 1884, to establish a new community called the Sisters of St. Joseph of Peace. In 1885 she was invited to establish a community in the Diocese of Newark. In 1888 she returned to the Anglican Communion, and she died in 1899 in Royal Leamington Spa, Warwickshire (England).

- **Standish O'Grady.** He was born in 1846 in Castletownbere, co. Cork, and after being educated at Tipperary Grammar School, he went to Trinity College, in Dublin, where he qualified as a barrister, although he also studied Irish history. At the end of his life he moved to the Isle of Wight (England) due to his health, and there he died in 1928.
- **Goddard Henry Orpen.** He was born in 1852 in Dublin (Ireland), and studied at Trinity College in Dublin, specializing in Medieval Ireland. He died in 1932 in Enniscorthy, co. Wexford.
- **John Bancks.** He was born in Sonning, Berkshire (England) in 1709, and was also known as John Banks. He started training as an apprentice to a weaver, but after an accident he left it and became a bookseller. He died in 1751 in Islington, London.
- **Thomas Birch.** He was born at Clerkenwell, London, in 1705. He did not go to university because his parents were Quakers. Instead, he was ordained deacon in the Church of England in 1730, and priest in 1731. In 1735 he became a member of the Society of Antiquaries, and also fellow of the Royal Society. He died being rector of St Margaret Pattens, in London, in 1766.
- **John Adams.** He was born about 1750 at Aberdeen (Scotland), where he went to university. He obtained a preaching license and move to London to be minister of the Scotch church in Hatton Garden. He then opened a school at Putney, London, where he died in 1814.
- **Maria Graham (known as Lady Maria Callcott later on).** She was born in 1785 in Cumberland (England) under the name of Maria Dundas. In 1808 he moved to India with her father, and there she married, changing her surname to Graham. She returned to England in 1811. She also lived in Italy for a while and in Chile and Brazil. In 1823 she was in England again. In 1824 she returned to Brazil, staying at the royal palace, and went back to England in 1825. She

married for the second time in 1827, changing again her name, now to Callcott. She became Lady Callcott in 1837, when her husband was knighted. She died in 1842 in Kensington, London.

- **Lucy Aikin.** She was born in 1781 at Warrington, Cheshire (England), in a family of writers, and she was educated by her father and her aunt. She started writing at an early age, and some of her writings were under the name of Mary Godolphin. She died in London in 1864.
- **Martha Walker Freer.** She was born in Leicester (England) in 1822. Although she married in 1861 changing her name to Martha Walker Robinson, she used to write under her maiden name, Martha Walker Freer. She died in 1888.
- **Montagu Burrows.** He was born in 1819 in Hadley, Telford, Shropshire (England), and he attended Kingsmill's Boys School in Southampton, and then went to the Royal Naval College, in Portsmouth. In 1834 he joined HMS *Andromache* as a midshipman, and returned to the College as a mate in 1842. In 1846 he became an instructor in gunnery in HMS *Excellent* for six years, and he was promoted to Commander in 1852. Then he decided to study at Magdalen Hall in Oxford, with a first class in 1856 in *literae humaniores* studies, and continued with his studies in the newly established School of Law and History, with another first class in 1857. In 1862 All Souls College, in Oxford, established the post of Chichele Professor of Modern History, and he got it, staying there until 1900 when he retired. Outside his teaching duties, he was chairman of the Oxford branch of the English Church Union, secretary of the Universities' Mission to Central Africa, founder of the Church of Sts Philip and James in North Oxford, president of the Church Schools Managers and Teachers Association, and a member of the group that founded Keble College, Oxford. He was also chairman of the school of modern history from 1889 to 1893. He died in 1905 in Oxford.
- **Samuel Rawson Gardiner.** He was born in 1829 near Alresford, Hampshire (England). He was educated at Winchester College, and at the Christ Church of the University of Oxford, with a first class in *literae humaniores*. Later on, he collaborated with the All Souls College and the Merton College, and he also taught modern history at the King's College of London. He died in 1902 in Sevenoaks, Kent (England).

4.3.2. Comparison of authors

Too much information has been given above, and in order to have a clearer vision, some variables have been chosen to compare these authors before taking a look at their texts.

The first thing that is evident when looking at these authors is the small presence of women among them. As it was pointed out in previous chapters, although women were involved in science, that was not with regard to the public sphere, and thus, very few names of women appear in books and publications. That is why their representation here is restricted to only four women (out of 32 authors), all of them in the 19th century, and all of them as well in the discipline of History, which would be easier to seep into than Mathematics.

Women in this time, as we have already seen, were not allowed in Universities; nevertheless, that does not mean they did not have an education, normally at home with private tutors, and learning and practising with fathers or brothers. Lucy Aikin, for example, was educated at home by her father and her aunt, and Maria Graham researched and worked with her husband.

But not all men of the time had economical resources to attend University. Thomas Birch could not attend University since he belonged to a Quaker family, and that was not allowed. And some others, such as Smith or Edgeworth were educated at home prior to enter University.

In the following table we can see how the education of these 32 authors was, concerning their attendance to University or not.

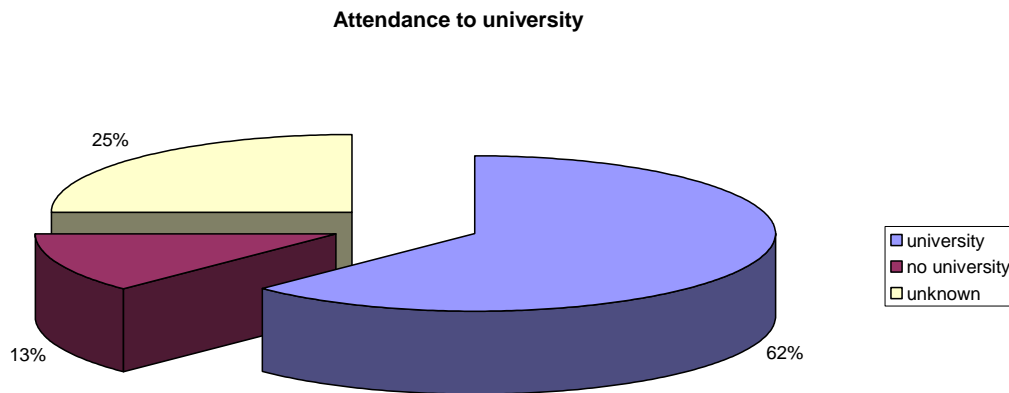


Figure 1: Attendance to University

We can observe that the vast majority of the authors attended University in their lives, although we have no information of a quarter of the authors about this aspect of their education.

Although there were some exceptions, those attending University were of, at least, a medium class, and if we follow the classification made by Hughes (1998) about social classes, the conclusion is that the whole of our authors were of the third and fourth classes, which included the clergy, doctors, merchants and manufacturers on a large scale and bankers (on the third class), and lesser clergy and doctors, lawyers, teachers, ship owners, lesser merchants and manufacturers, shopkeepers, artists, builders, mechanics and people of a moderate income (on the fourth class).

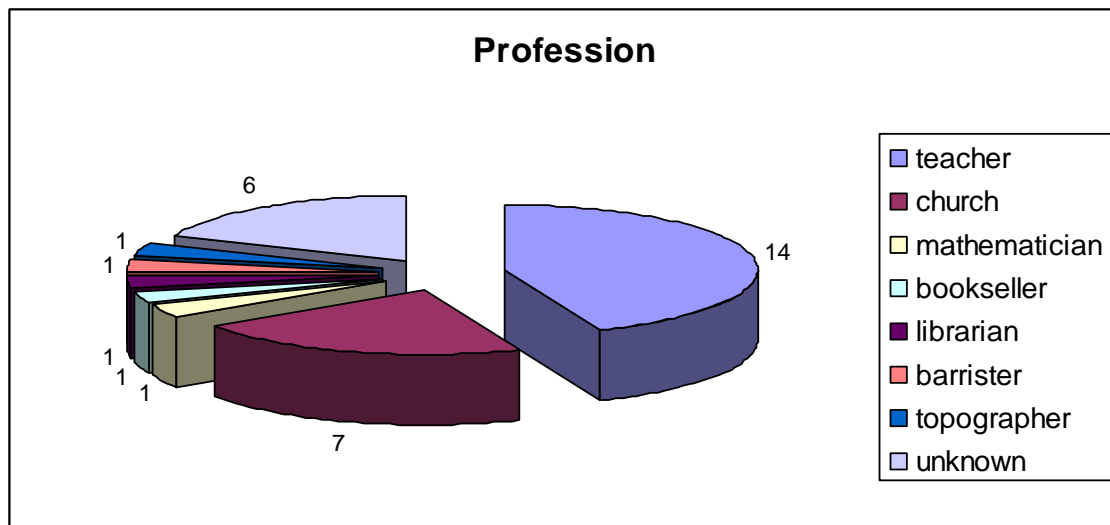


Figure 2: Profession of authors

What appears in the table above is the main profession of the authors, some had several. The group “church” makes reference to those with a church-related profession as their first or only option. Thomas Leland, for example, was both a priest and a professor of oratory. And in the group teacher, the most numerous one, I have included all the authors related to teaching, either at University, school, or any other type of educational level, although most of them were university instructors.

If we transfer this graph to each country, we see there is no difference, since the same professions are similarly represented.

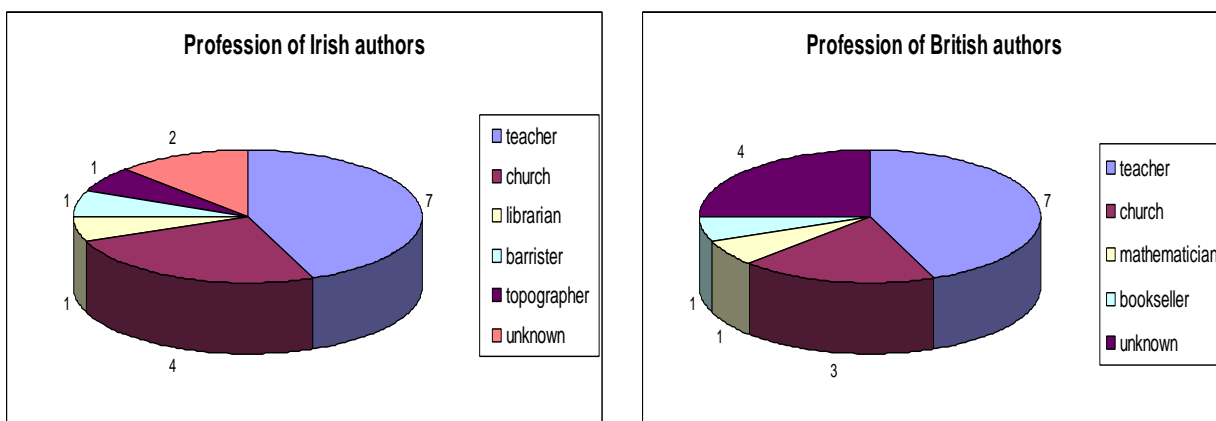


Figure 3: Profession of authors according to provenance

The reason for the authors to have a similar social background is due to the fact that those were the people who used to attend social circles of knowledge at the time. They occupied positions with some kind of power or influence on society, not

Corpus material

necessarily related to money, but to knowledge; in Bazerman (2011: 29)'s words, "in Renaissance and early modern Europe learning became a competitive force".

Another variable taken into account was that related to the age of authors when they published the text included in the corpus. Some authors were very prolific, some others were not so, but this is not relevant, since only one (or two) works are taken into account here, and the date of publication will depend only on the selection criteria. This is the case of Matthew Young, whose works were published with a twelve-year gap, but only the first of them has been taken into account.

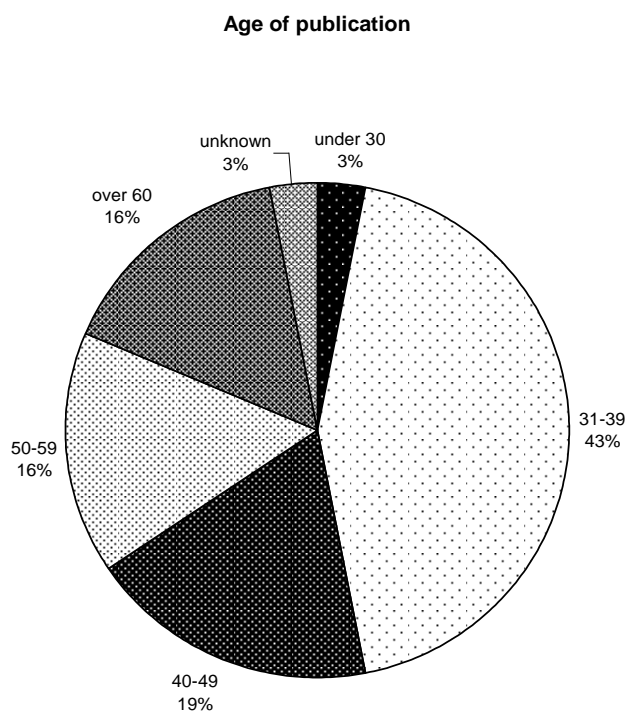


Figure 4: Age of authors when the selected texts were published

Not surprisingly, nearly half of the authors were under 40 years old when they wrote their works. What is a bit shocking is the number of writers with publications over the age of 60, moreover if we take into account that one of them belongs to the first half of the 18th century, when that was considered an old age. In this same group we even have authors older than 70, who, although belonging to the end of the 19th century and beginning of the 20th century, had an advanced age. This could be important in the case these authors could have a slightly different language due to their age. However, only three of those authors over 60 are Irish (none Scottish), and none of them is from

an area where Irish was widely used. Therefore, this variable will not be taken into account for the analysis.

In what makes reference to the language, although we cannot be sure, since we lack specific information about each author in this sense, it is quite feasible that the situation had been as follows. Apart from the obvious fact that all the authors spoke English, among those authors from Great Britain, two of them were from Scotland, a place already dealt with previously, with different languages. However, the probability of these two speakers of having Gaelic Scottish as their mother tongue is very low because, as seen in Chapter 1, the Gaelic language in Scotland lost its power as early as the 14th century, and from that moment on, it was relegated to the northern part of Scotland and its islands, as shown on the map below (Figure 5). Our Scottish authors are from Aberdeen and Edinburgh, far from that “Gàidhealtachd” (Gaelic-speaking areas), and from many centuries after the 14th, so their chances of having Gaelic as a mother tongue, or even speaking or having some knowledge of it, are very improbable.

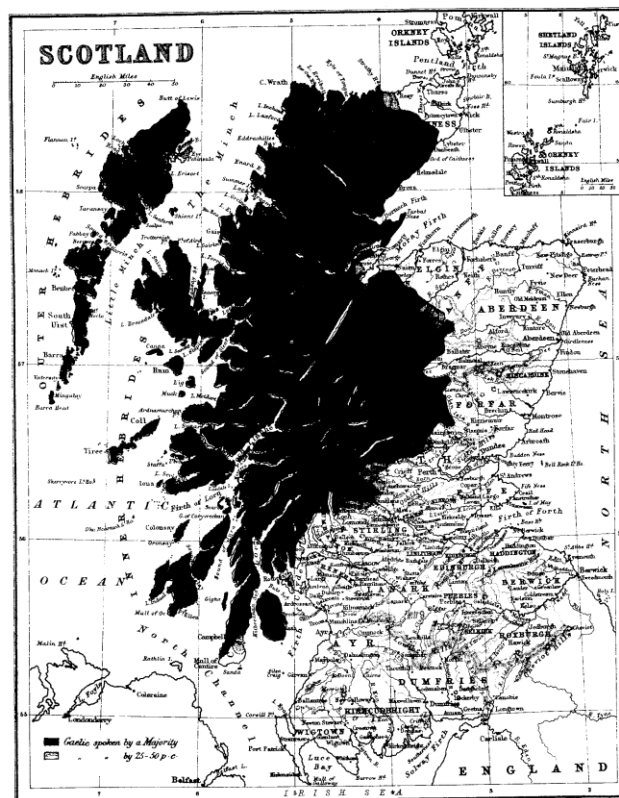


Figure 5: Scottish Gaelic spoken in Scotland in 1834. From Ravenstein (1879: 592)

The remaining fourteen British authors were English, so there is no doubt about their mother tongue, and the language used in every day communication.

As for Irish authors, the situation is a bit different. The whole of Ireland was under the influence of the Irish language, however, the influence was different depending on the regions. Eight out of the sixteen authors, that is, half of them, are originally from Dublin; the rest are each one from a different county: Clare, Roscommon, Longford, Laois, Mayo, Cork, and Antrim, in the north.

The map below shows where the Irish language was spoken in 1851. As we can see (Figure 6 below), it was widely spoken over the country, although at different degree depending on the region. Moreover, the change from Irish to English started on the east coast and was slowly moving to the west (Gansterer 2016). Nevertheless, there were small areas with a high number of speakers in the east, as it happened in the county of Meath (Ní Mhungaile 2015a). The next census made in Ireland showed a great decline in the use in this county and in other parts of the west.

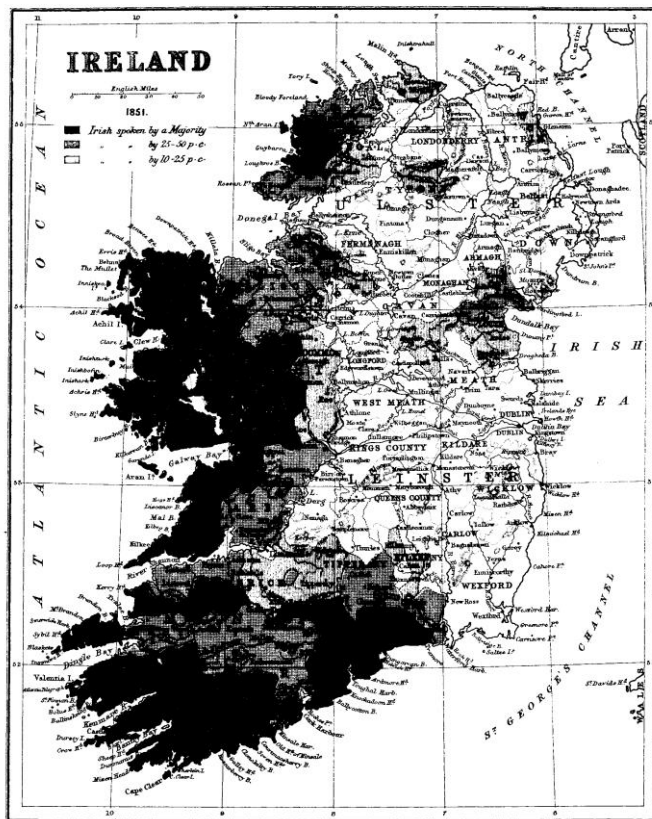


Figure 6: Irish-speaking areas in Ireland in 1851. From Ravenstein (1879: 582)

Looking at the map and taking into account where the Irish authors were born, it is very likely that for those who were born in the counties of Clare, Roscommon, Mayo

and Cork, Irish is their mother tongue, or at least they could speak it and have a great command of the language so as to be able to communicate using it. And actually, some of them spoke it, such as Standish O’Grady, as Ní Mhunghaile (2015b) points out. Others were interested and worked with languages, so a knowledge of the Irish language could be assumed, such as Matthew Young, who had a deep interest in Irish literature and even published translations of old manuscripts from Irish; or Francis Ysidro Edgeworth, who studied ancient and modern languages; and Thomas Leland, who worked with history and translations.

For the rest, it is true that Dublin was one of the regions with less influence of the Irish language²¹, since it was the capital of the country and where all the power from England was established, but we also should bear in mind that many of these authors were interested in Irish matters, although the extent to what they could learn by themselves is uncertain to us.

This chapter has served as an introduction to authors and texts, and how to face and analyse them. The following chapter will show the different results obtained when analysing the texts considering all the different criteria and variables.

²¹ Dublin was the centre of what was known as *the Pale*, and as van Hattum (2002: 44) points out “Outside the towns and the Pale, the population of Ireland was almost exclusively Irish-speaking at the start of the sixteenth century.”

CHAPTER 5. DISCUSSION

5.1. Introduction

With all the historical and linguistic aspects in mind, and after analysing all the texts from the 32 authors in the corpus, I am going to show the results from two main points of view: the disciplines selected and the geographical origin of authors. These will be the two variables applied to my particular study of passive constructions. I would like to emphasize that this is a corpus-based microanalysis of the ways the passive voice in the English scientific writing can be influenced by the Irish language in writers with this attested provenance. To go deeper into this analysis, texts from two different scientific disciplines have been selected, Mathematics and History, in order to explore whether disciplines of different nature could yield similar or opposite results.

Two different variables will be used for the analysis. The first one will be that of discipline, so two big sub-corpora will be compared, Mathematics and History. Once this analysis is done, the two disciplines will be treated individually, making a new comparison within them. Thus, the sub-corpus of Mathematics will be divided according to the geographical origin of the authors, and there will be a comparison

Discussion

between British and Irish texts dealing with Mathematics. The same will be done with the sub-corpus of History, separating texts belonging to Great Britain and Ireland.

In order to close the circle, after the analysis using the variable of discipline (with including the division according to geographic origin of authors), the second variable to be taken into account will be that of geographical provenance of authors. Thus, the two sub-corpora of Ireland and Great Britain will be compared.

In this discussion I will be focusing on the passive voice, its different classifications and uses, as presented above in Chapter 3. I will be offering results dealing with the basic structure on the construction but also taking into account that a passive voice must fulfil (as stated in Chapter 3) the following requisites: it needs a subject with a semantic meaning, a correspondent active construction, and the subject of the passive must correspond with the patient of the active. I will also observe the sort of auxiliary verb employed, as both possibilities (use of *be* and *get*) present in the samples forming my working material. Therefore, the linguistic and quantitative aspects that will be discussed are the following:

- Frequency of passive constructions
- Verb typology in passive constructions
- Use of modals in passive structures
- The occurrence of auxiliary verbs
- By-phrases as agents
- Traces of Irish in English passives

The reasons for these aspects and not others is due to the characteristics the passive voice has in the Irish language, such as reference of the active voice over the passive when there is an agent or the different options to represent the meaning of a modal verb without using it; but also due to the different disciplines analysed, Mathematics and History, with nothing to do beforehand.

In order to make a deep analysis, the last step will consist of an individual analysis of text by a few authors, a more qualitative-like analysis. This means that some authors, as the representatives of the various possible situations related to language will be chosen, in an attempt to replicate a focus group. The results will be compared to those obtained when analysing groups of texts according to the geographical origin or discipline variables. The reason for this analysis in depth of some authors is the possible

discrepancy in the results obtained. What I mean is that the possible interference in the English language could be present in only a couple of authors and not in all of them. With these individual analyses I want to check that possibility, which could be not reflected otherwise.

Taking into account everything stated in the previous chapter, those approaches with a sociolinguistic profile will be the ones followed here. In the same way, the field of study to which this analysis would be ascribed is that pointed out by Hernández-Guerra (2014) as sociolinguistic variation analysis. This is due to the fact that authors write influenced by the social and cultural atmosphere around them, including the language.

The first analysis to be done will be the quantitative, taking into account the different variables already stated.

5.2. Quantitative analysis

As already stated, the corpus I am dealing with for my preliminary work is formed by a total of 346,975 words. These words, according to the variables of discipline and geographical origin are distributed as set out in Figure 7 below.

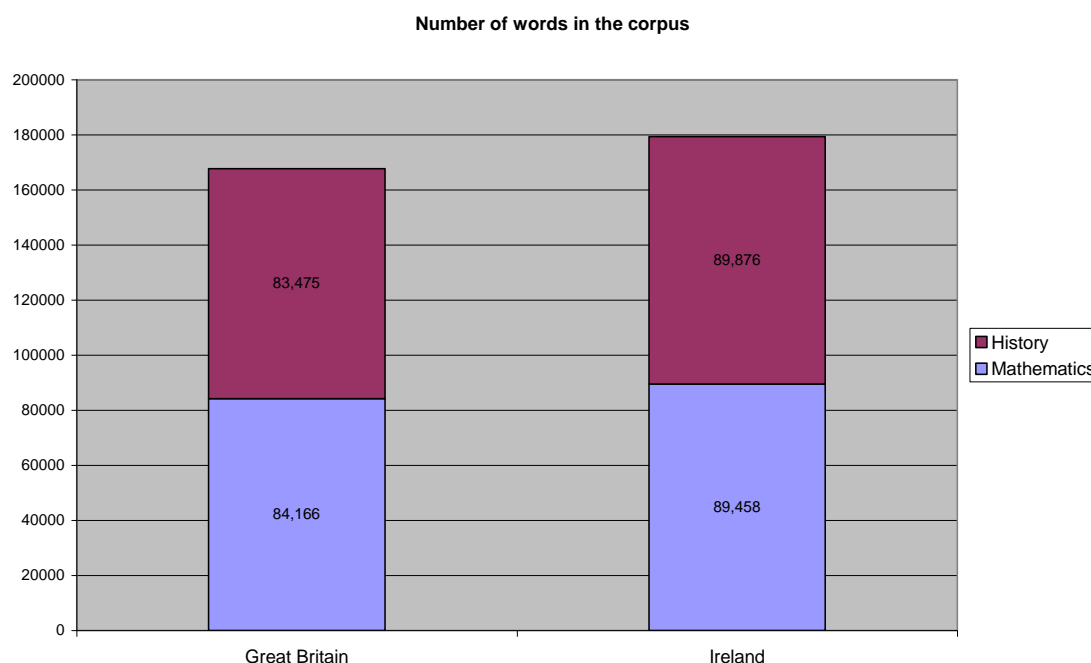


Figure 7: Number of words in the corpus

On the whole, the number of lexical verbs found in a passive construction amount to 7,425, which means that nearly 2.14% of the words are verbs in the passive voice. Only 1,298 of those verbs are accompanied by a modal verb (17.48%), and 80.47% of the passive verbs go together with an auxiliary (5,975). The rest, 1,450 examples (19.52%) are reduced or short forms, that is, verbs in the passive voice without any auxiliary form before (see Table 6). All the cases where the passive voice is formed with an auxiliary verb, this verb is *to be*, except in 5 occasions, where a different verb (*become*, *get*, *seem*) is used, as we will see later on.

Elements in the passive structure	Raw figures	Percentage
modal verbs	1,298	17.48
auxiliaries	5,975	80.47
by-phrases	1,545	20.80

Table 6: Elements in the passive structure

Finally, we have a number of *by-phrase* agents which accompany the passive voice. We have a total of 1,545 examples of these *by-phrase* agents. We have to bear in mind that not all the cases with the preposition *by* form a *by-phrase* agent. In some cases what we find are examples of an instrumental *by*, and in many of the cases the preposition *by* is simply followed by a verb in the –ing form, as it happens in a text by Matthew Young (1786):

(135) (...) is estimated by multiplying the value (...)

On some occasions, this preposition is followed by a noun, similar to an agent, but with a different meaning, that of indicating means, as in the case of the text by Mary Francis Cusack (1875):

(136) (...) being easily reached by sea (...)

All these cases have been discarded in the analysis.

5.2.1. Variable: discipline

As explained above, the first variable to be taken into account is that of discipline, where we have two big groups, Mathematics and History. Thus, the corpus for the Mathematics texts is formed by 173,624 words, in comparison with 173,351 words in the History corpus. To compare these two groups there is no need of using normalised figures since both sub-corpora have a similar number of words. Thus, the comparison will be done using raw figures; however, Table 15 shows normalised figures in order to follow the same structure as the other comparisons between sub-corpora. There is a slight difference in the number of passive verbs in these two groups. The first one (Mathematics) has 2.26% of the words in the passive voice, with a total of 3,928 cases, while the other group has 2.01%, which are 3,497 examples. Where we can see a huge difference is in the number of modals employed. Beforehand it could be said that it is very likely to find more modal verbs used in Mathematics, since these texts deal with hypothesis and theorems, so nothing is completely sure, and some modals have precisely that sense of possibility, probability or uncertainty. According to the Cambridge Dictionary Online, one of the meanings modal verbs can have is that where the “writer decides how certain something is, either in the present, future or past. They predict or speculate about a fact”, and that is what mathematicians do when elaborating hypothesis (see example (137)).

(137) (...) may be examined by the method already employed (...)
(Smith 1878).

After analysing the samples used in the present study, I have found that the Mathematics group doubles the cases of the History group, 892 (22.70%) versus 406 (11.60%) constituting the main difference. The remaining figures out of comparison are quite similar, being the number of auxiliary verbs used 3,143 (80.01%) in mathematics, and 2,842 (81.26%) in history. The same happens with the presence of by-phrase agents; mathematicians use them in 821 occasions (20.90%), and historians 724 times (20.70%).

	Results according to discipline			
	Mathematics		History	
passive verbs	3,928	2.26%	3,497	2.01%
modal verbs	892	22.70%	406	11.60%
auxiliaries	3,143	80.01%	2,842	81.26%
by-phrases	821	20.90%	724	20.70%
total words	173,624		173,351	

Table 7: Results in sub-corpora Mathematics and History (raw figures)

Elements in the passive structure	Mathematics	History
modal verbs	51.37	23.42
auxiliaries	181.02	163.94
by-phrase agents	47.28	41.76

Table 8: Elements in the passive structure. Comparison between Mathematics and History (normalised figures)

Once the comparison according to discipline is done, the next comparison will be carried out separating the two disciplines according to the place of origin of the writers.

5.2.1.1. Mathematics

A) British authors

The first discipline to be treated is Mathematics, and within this field, the first authors will be the British. We have a total of 84,166 words, what makes 24.25% of the total corpus. From this number of words, only 2.15% are in the passive voice, with a total of 1,813 verbs in this form. Once we know the total number of verbs in the passive voice, we have to point out that 23.66% of them have a modal verb modifying it. That makes a total of 429 modal verbs used in these texts. In what makes reference to the use of auxiliaries, 83.23% of the verbs (1,509) are formed with an auxiliary; only 304 verbs are reduced forms of the passive voice.

British authors in Mathematics		
Elements in the passive structure	Raw figures	Percentage
modal verbs	429	23.66
auxiliaries	1,509	83.23
by-phrases	316	17.42

Table 9: Elements in the passive structure. Results in the British authors, sub-corpus Mathematics (raw figures)

All the auxiliary positions in these passives are occupied by the verb *to be*, except in one case. In the text by George Green (1828), there is one example of a passive verb with a different auxiliary, *become*:

(138) (...) the value of p becomes known.

And about the by-phrase agents, there are 316 cases in these texts (17.42%). Of course there are many other sentences with *by* in the passive sentences, but they are not agents; most of the times there are simply the preposition *by* plus a verb in *-ing* form, such as in example (136).

(139) (...) this is accomplished by finding such a power (...) (Barlow 1811).

B) Irish authors

Still within the field of Mathematics, I will concentrate now on Ireland. In this case we have a higher amount of words, and the percentage with respect to the total is 25.78% (89,458 words). This is due to the fact that some texts are over 10,000 words, including the work by Henry John Stephen Smith, where two smaller samples have been chosen, the total going over that number.

Sub-corpus Mathematics		
Elements in the passive structure	Raw figures	Percentage
modal verbs	463	21.89
auxiliaries	1,624	76.78
by-phrases	505	23.87

Table 10: Elements in the passive structure. Results in the Irish authors, sub-corpus Mathematics (raw figures)

In the case of Irish authors, there are 2,115 cases of verbs in the passive voice, being 2.36% of the total words in this sub-corpus. In the case the use of modal verbs with the passive voice, the percentage is of 21.89% and a total of 463 examples. The number of verbs with an auxiliary in these texts is 1,624 (76.78%), leaving only 491 examples without auxiliary. As happened with those British authors in the field of Mathematics, all the examples, but one, use the verb *to be*, and similarly again, the only exception uses the verb *become*. This example is found in Sir William Rowan Hamilton's sample:

(140) (...) that curve changes shape, and becomes confounded with a little parabolic arc. (1828)

In the last aspect, that of the presence of by-phrase agents, we have 505 agents, making a total of 23.87% of all the passive examples. There are also by-phrases, as in the previous group, which have nothing to do with a passive agent, such as in the case of Matthew Young (1786):

(141) is estimated by multiplying the value of the sum.

C) Comparison between British and Irish authors

In order to make a rigorous comparison between these two sub-corpora, it is necessary to normalise figures, in this case to 10,000. Table 10 shows the following data with normalised figures. Thus, the number of passive verbs is similar in the two sub-corpora, although a bit higher in the Irish group (215.40 and 236.42). The number of modals is even more, with a difference below 1, 50.97 against 51.75. When comparing the use of auxiliary verbs with the passive voice we can observe very similar numbers too, with 181.53 for the Irish texts and 179.28 for the British ones. But the aspect which mostly differs is the presence of the by-phrase agent. In the case of British authors, they use this element 37.54 times, while the Irish authors show 56.45 occurrences. These results show the lack of influence of the Irish language in these Irish authors. As it was stated in Section 3.7, the Irish language tendency is not to use the passive voice if there is an agent; in these cases the active voice is used instead. With

the presence of such high number of by-phrases, even higher than the British authors, we can see there is not such influence in the English used by the Irish writers.

Elements in the passive structure	Comparison sub-corpora Mathematics	
	Great Britain	Ireland
modal verbs	50.97	51.75
auxiliaries	179.28	181.53
by-phrase agents	37.54	56.45

Table 11: Elements in the passive structure. Comparison between British and Irish authors in Mathematics (normalised figures)

Generally speaking, as we can see in Figure 8, Irish authors writing about Mathematics use more passive verbs than British authors writing about the same topic. Apparently it does not seem to exist any reason related to the linguistic context for this fact. Thus, the minimum difference (only 4%) might be due to idiosyncratic or stylistic issues of the authors.

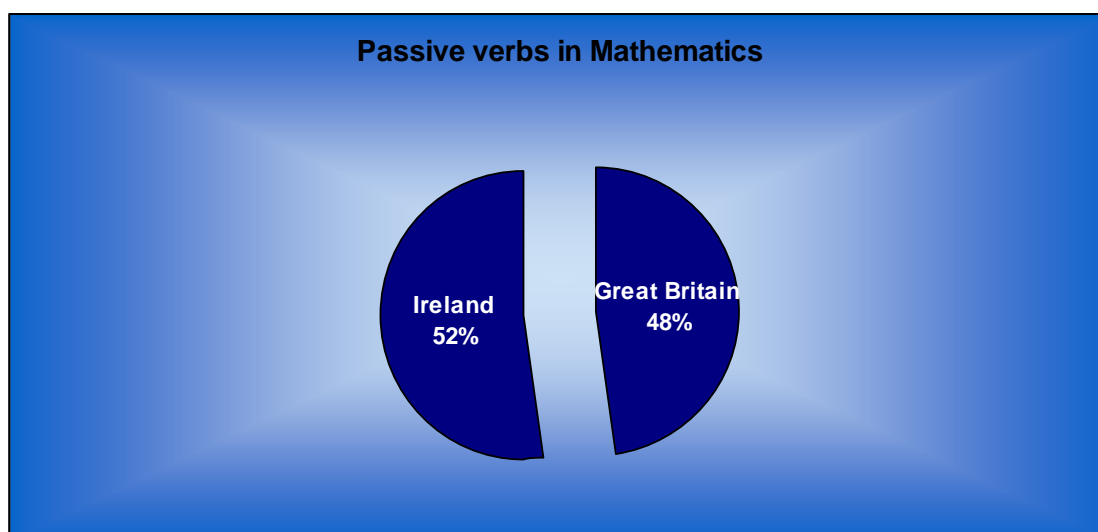


Figure 8: Passive verbs in Mathematics (normalised figures)

The next field I am dealing with is History, still within the Mathematics sub-corpus.

5.2.1.2. History

From the number of words that form this History sub-corpus we can obtain the findings that are explained in the following paragraphs. History texts have been written by both British and Irish authors as in the case of Mathematics.

A) British authors

The amount of 83,475 words (24.05% of the total) represent British authors writing on history issues. In this set of words I have detected 1,574 cases of passive voice, being 1.88%, a bit less than the two previous groups (British authors and Irish authors in the Mathematics sub-corpus). 162 passive verbs from the total of 1,574 found in this sub-corpus have a modal verb in the construction, representing 10.29%. The auxiliary verbs represent 81.06% of all cases, which is the equivalent to 1,276 cases, leaving only 298 passive verbs in their reduced form.

British authors, sub-corpus History		
Elements in the passive structure	Raw figures	Percentage
modal verbs	162	10.29
auxiliaries	1,276	81.06
by-phrases	261	16.58

Table 12: Elements in the passive structure. Results in the British authors, sub-corpus History (raw figures)

Here are more cases where the auxiliary verb is not *be* have been found, exactly two cases, with two different verbs, one with *become*, in the text by John Adams (1795) (see example (142)); and another example with the verb *get*, in the same text, (“got acquainted”). About the by-phrase agents present in these texts, there are not so many as in the previous groups of texts (British and Irish belonging to Mathematics). I have detected only 261 cases, which represent 16.58% of the total passive constructions in British History texts.

(142) (...) became known by its name (...).

B) Irish authors

The last group of texts embraces those written by Irish historians. This set of samples is slightly bigger than the others, containing 89,876 words which represent 25.9% of the total of the corpus used in this analysis. The number of passive verbs in this sub-corpus is 1,923, representing 2.13% of the words of the group. If we focus on the presence of modal verbs, 12.68% of the passive verbs go with one of them, with a total of 244 occurrences. In relation to auxiliaries, there are 1,566 examples of verbs with them (81.43%), and only 357 reduced forms. There is an only example of an auxiliary not being the verb *be*, and that happens in the text by James Hardiman (1820), where we can read:

(143) (...) seemed so fully persuaded (...).

And talking about the by-phrase agents, we have 463 cases in these texts, which correspond to 24.07% of all the passive forms.

Irish authors, sub-corpus History		
Elements in the passive structure	Raw figures	Percentage
modal verbs	244	12.68
auxiliaries	1,566	81.43
by-phrases	463	24.07

Table 13: Elements in the passive structure. Results in the Irish authors, sub-corpus History (raw figures)

C) Comparison between British and Irish authors

Comparing these two sub-corpora formed by texts written by British and Irish historians we can see that the number of passive verbs differs to a certain extent. The Irish history texts sub-corpus contains much more occurrences, 188.55 versus 213.96 (normalised figures to 10,000). Some difference still persists when comparing the results dealing with the use of modal verbs: Irish texts containing 27.14 cases per 10,000 words, lowering to 19.40 in the case of British texts. These numbers are relatively similar, but they are far away from those we had on the mathematics texts

Discussion

with over 50 occurrences per 10,000 words (50.97 in the British texts and 51.75 in the Irish ones).

As it was already pointed out in Section 5.2.1., a higher presence of modal verbs in the Mathematics texts may be caused by the definition of modality, which allows the writers to make hypothesis about facts. These hypotheses are widely used in Mathematics, but not in History, leading to such difference in the use of modal verbs.

The biggest differences between these two groups lie in the use of the auxiliary and in the presence of the by-phrase agent. The auxiliary is used more frequently in Irish texts, with 174.24 occurrences per 10,000 words, in contrast with the cases used by British authors, with only 152.86 hits in normalised figures. The same can be seen when talking about the by-phrase agent, where the Irish authors use this item 51.51 times per 10,000 words, and the British only 31.26.

Elements in the passive structure	Comparison according to provenance	
	Great Britain	Ireland
modal verbs	19.40	27.14
auxiliaries	152.86	174.24
by-phrase agents	31.26	51.51

Table 14: Elements in the passive structure. Comparison between British and Irish authors in History (normalised figures)

As happened with the discipline of Mathematics, in the field of History Irish writers use more passive verbs than British authors, as can be seen in Figure 9 below.



Figure 9: Passive verbs in History (normalised figures)

5.2.2. Variable: geographical provenance

The second variable to compare the texts is regarding the geographical provenance of authors. In this sense, the sub-corpus of British authors would be formed by 167,641 words, and the Irish one by 179,334 words. Due to this quantitative difference, figures will be normalised to 10,000 words. There is not an equal number of passive verbs as 202.03 cases have been traced in the British authors writings whereas 225.16 have occurred in Irish samples. The use of modals is also different, again in favour of the Irish authors, with 35.25 modals for the British, and 39.42 cases for the Irish. The use of auxiliary verbs in the passive voice differs a bit more than the two previous items, with the Irish leading in number again, 178.43 against 166.12. Where there is a huge difference is in the use of by-phrase agents. In the British texts I have found 34.41 cases per 10,000 words, while in Irish texts this figure increases to 53.97 cases. All these numbers can be seen in Table 15 below.

	Results in the sub-corpora according to provenance			
	Great Britain		Ireland	
passive verbs	3,387	2.02%	4,038	2.25%
modal verbs	591	17.44%	707	17.50%
auxiliaries	2,785	82.22%	3,200	79.24%
by-phrases	577	17.03%	968	23.97%
total words	167,641		179,334	

Table 15: Results in sub-corpora Great Britain and Ireland (raw figures)

Elements in the passive structure	Comparison according to provenance	
	Great Britain	Ireland
modal verbs	35.25	39.42
auxiliaries	166.12	178.43
by-phrase agents	34.41	53.97

Table 16: Elements in the passive structure. Comparison between British and Irish texts (normalised figures)

The reason for this similitude in some aspects between groups might be due to the fact that two disciplines are analysed together. When the comparison was made between different disciplines, the results were not so similar, and that is because texts in the two disciplines do not share many linguistic characteristics. Those who wrote about history, at least in these cases, do not write, or do not attempt to write in a very scientific way, but they write for a wide audience. My reason to say that is because their subjects are not very specific, they write about lives and histories of cities, towns or countries, not having in their minds any specific audience, which would have been remarked in the title. According to Moskowich (2020) in the eighteenth century, and nineteenth too, historians move towards a more objective view, and they adopt the position of narrators of facts. That reinforces the idea that they do not write for a specific audience.

In the field of Mathematics, there was also a change. As many authors point out (Cajori 1910, Fraser 2008) the last years of the seventeenth century were witness of the change of direction mathematics was taking. This change is clearly observed in the eighteenth and nineteenth centuries, and it affected the way writers would write. The study of geometry as the centre of mathematics was replaced by the research based in analysis. Mathematical activity in the eighteenth century was characterised by a strong emphasis on analysis, which demanded a higher degree of rigor and precision in the study and dissemination. Thus, the mathematical texts of this period tend to be more accurate and therefore more specific in language and terminology.

And that is reflected in the language they use, and that is why here are so many differences between the texts when compared by discipline, and not so many when we do the same according to their origin.

Section 5.3. below will cover the different types of verbs that have been traced in my search for and analysis of passive constructions.

5.3. Verb typology in passive constructions

The following subsections will deal with the meaning and implication of the presence of such verbs with so high frequencies in each sub-corpus. In this section I will only present the results obtained in the analysis.

The type of verbs used in passive structures will be the topic of this section. We will see which verbs are most frequently used in Mathematics or History, and which ones are preferred by Irish authors in comparison to British ones. For the semantic classification of verbs, I will follow what Crespo states in her work of 2012b, and which will be explained in Section 5.3.1.

In order to make these comparisons, I have not taken into account all the verbs present in all the texts, but only those which occur frequently. Although the usual way of presenting data is from the general to the individual, I have opted to do the opposite for a simple reason. I am not going to focus on individual texts for the comparison, but on groups of them. Therefore, I will start with some examples of numbers in an individual sense, to focus afterwards on the groups and their results. Thus, for each text, only verbs occurring at least 4 times have been considered. When put into groups, a minimum of 30 occurrences has been established (there are eight authors in each group).

The first group to be analysed comprises mathematics texts written by authors from the British territory. Within this group, most texts have a similar number of verbs which are repeated over 4 times, although we have some differences. For example, the most frequently used verb in one single text is “call”, which is present 53 times in the passive voice in the text by Alfred George Greenhill (1886).

(144) (...) this relation is called an implicit relation between x and y .

However, in the text by Peter Barlow (1811), the most frequently used verb in the passive voice has 15 occurrences. This number is shared by three verbs, “divide”, “represent”, and “resolve” (examples (145), (146) and (147)). Those verbs occurring only once will be treated later on, when dealing with the concept *hapax legomena*.

(145) An odd number cannot be divided by an even number (...)

Discussion

(146) Every number, without exception, may be represented by the formula (...)

(147) (...) a number may be resolved into two factors (...)

In the same way the verb “call” is the most frequent in a single text in this group, it is also the most frequent in the whole group, with a total of 111 cases, which make 6.12% of the total verbs in the passive voice in this group. There are 89 cases of the verb “find” in these texts, 4.9%, as example (148). 3.7% of these structures are formed with the verb “take”²², example (149). The same percentage applies to the verb “give”, example (150). In this ranking, the next verb is “express”, with 52 cases, and 2.86%, example (151).

(148) (...) the true answer will be found (...) (Malcolm 1730)

(149) (...) to be taken from the logarithm (...) (Donne 1765)

(150) (...) are given by the terms of the binomial (...) (Gosset 1907)

(151) The definition may be expressed (...) (Taylor 1872).

Other verbs over 30 cases are “add” with 39 (2.15%), “require” with 38 (2.09%), “obtain” with 36 (1.98%), “write” with 34 (1.87%), “determine” with 33 (1.82%), and “divide” with 31 cases (1.7%). The frequency of the rest of the verbs is less than 30 cases in the total of the group, and some of them are “suppose”, “do”, “multiply”, “represent”, “reduce” or “measure”.

²² Only complete verbs with meaning have being considered. That is to say, that in this very case, there are more structures in the passive voice with the verb “take, but not on its own. For example, there are 10 take away”, not included in these numbers.

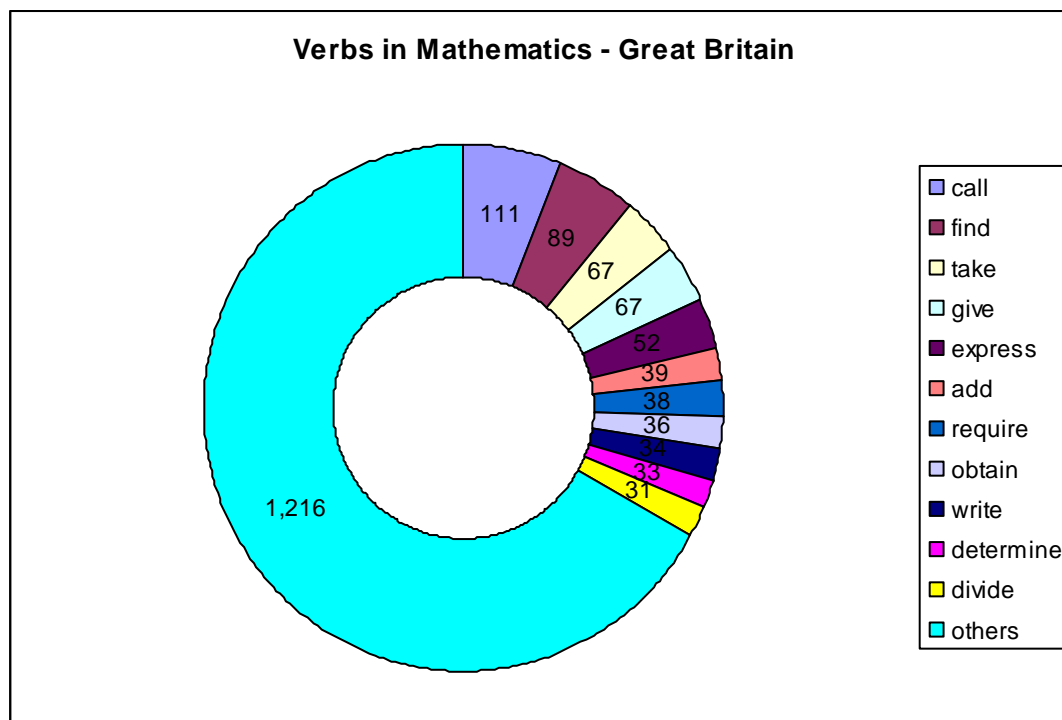


Figure 10: Verbs in Mathematics texts by British authors

Going on with Mathematics, and tuning now to Ireland, we see that this group is not as homogeneous as the previous one in the frequency of occurrence of a verb per text. 37 times is the highest a verb is repeated in a text, being “make” the verb in the text by Robert Adrain, example (152). On the opposite situation we have the text by Francis Ysidro Edgeworth, where a verb is repeated only 9 times as the highest frequency, “measure”, seen in example (153).

(152) (...) one of the observations was made (...) (Adrain 1817)

(153) (...) the length of the day measured by the interval (...)
(Edgeworth 1908).

Taking the whole group into account, “make” is still the most frequently used verb, with a total of 65 cases, making 3.07% of the total verbs in the passive voice in this group, as in example (154). The next verb is “give”, seen in example (155), with 60 cases and 2.83%. Continuing with the frequency, we have the verb “express”, with 57 cases (2.69%), “take” with 52 cases (2.45%), “find” with 44 cases (2.08%), “consider” with 42 (1.98%), “require” with 40 (1.89%), and “divide” with 37 cases and 1.74%, all of them seen in examples (156)-(161). Among those which do not go over 30 cases we can find “obtain”, “multiply”, “measure”, “reduce”, “suppose” or “mention”.

Discussion

(154) (...) any attempt has been made to express these relations geometrically (...) (Salmon 1852)

(155) (...) is given to testimony by children (...) (Young 1798)

(156) (...) may in other words be thus expressed (...) (Berkeley 1734)

(157) (...) B may be taken for any line (...) (Salmon 1852)

(158) (...) it will be found that the equations (...) (Smith 1878)

(159) (...) the preceding table may be considered as a table (...) (Adrain 1817)

(160) (...) it is required to find a mirror (...) (Berkeley 1734)

(161) (...) the radius be divided into any number (...) (Young 1786)

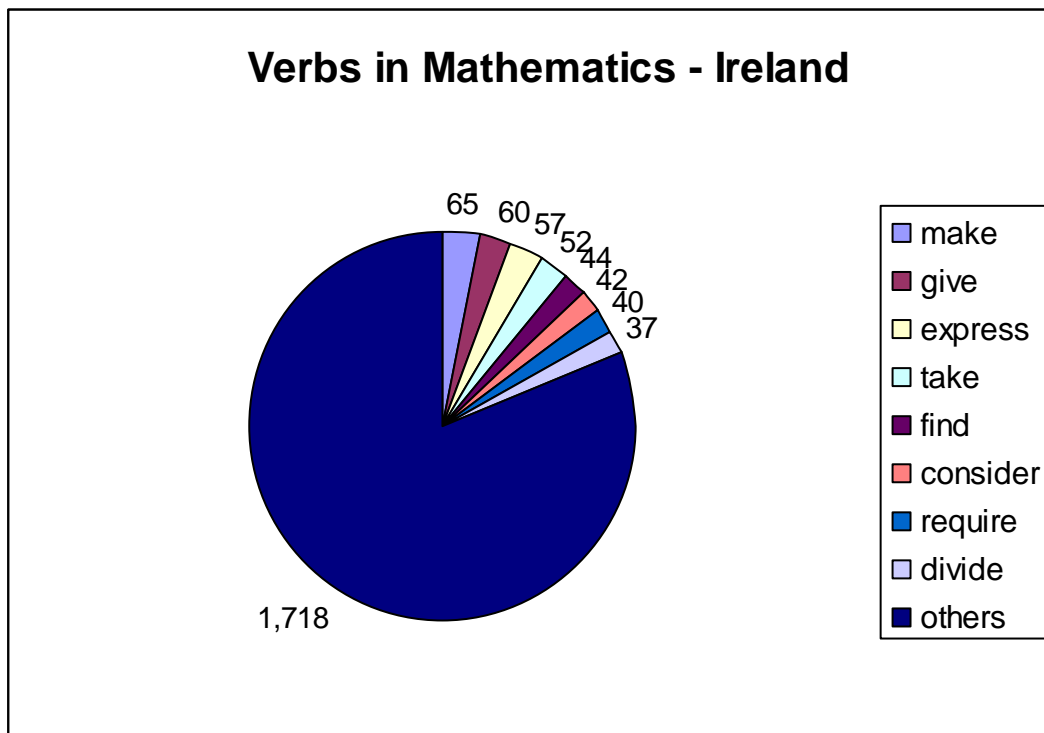


Figure 11: Verbs in Mathematics texts by Irish authors

After analysing those two groups, it is easy to see how similar the verbs used in both groups are. Some of those verbs belong to the so-called scientific language, such as

“multiply” or “divide”. Others are common verbs, as it is “take”. If we put these two groups together, Figure 15, we see that the most frequently used verb is “find”, with a total of 154 cases and 3.92%, seen in example (158). “Call” was another verb present earlier on, in example (144), and here its presence is of 143 cases, making 3.64% of the passive verbs. Another verb with a high frequency of occurrence is “give”, with 128 cases (3.25%), shown in examples (150) and (155). The verb “take” is also over 100 times present, 120 (3.05%), as examples (149) and (157) illustrate. Then, we have the verbs “express” which occurs 109 times (2.77%), “make” 83 times (2.11%), “require” 80 (2.03%), “divide” 68 (1.73%), “draw” 66 (1.68%), “consider” 59 (1.50%), “obtain” 57 (1.45%), or “add” 44 times (1.12%).

It is also important to see the situation in the other discipline, History. The first step will be again to analyse the texts by British authors. Looking at the verbs used in the passive voice, here the occurrence of verbs is not as high as it was in the Mathematics texts. Thus, the highest figure in an individual author is 10 times, the verb “give” in the text by Samuel Rawson Gardiner, example (162). In the text by Lucy Aikin only 5 structures have the same verb, “make”, seen in example (163).

(162) (...) his repeated warnings [...] were [...] given with unnecessary asperity. (Gardiner 1903)

(163) (...) great preparations being made (...) (Aikin 1833).

Putting all the texts in this group together, only the verb “make” appears over 30 times, exactly 40 times, which represents 2.54%, example (164). Other verbs with less presence are “take” (21 times, 1.33%), “send” (18 times, 1.14%), or “give” and “place”, with the same amount each (17 times, 1.08%). The number of verbs which appear several times is also lower in this group than in the previous one.

(164) (...) promises made by his Catholic majesty (...) (Freer 1860)

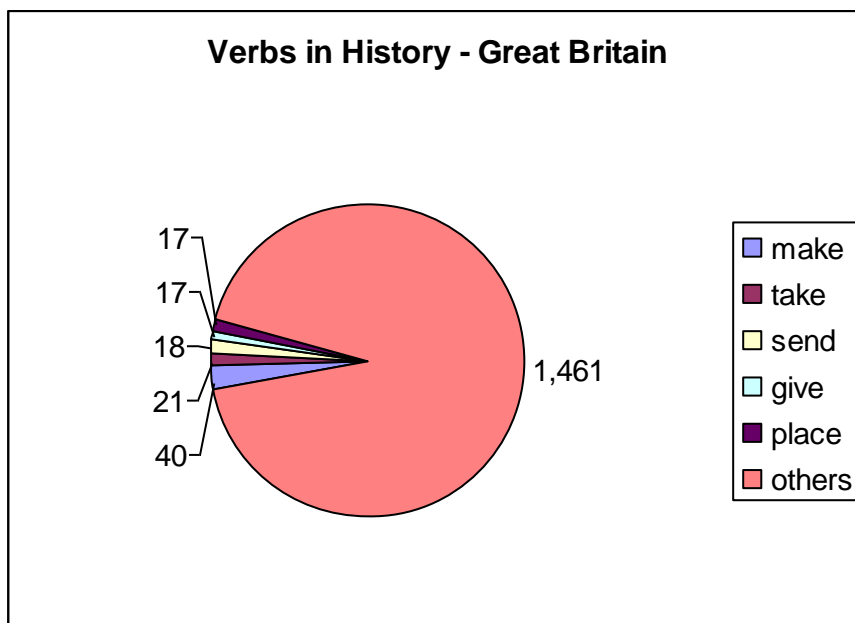


Figure 12: Verbs in History texts by British authors

The comparison of the most frequently used verbs in this sub-corpus, History texts by British authors, and the following sub-corpus, History texts by Irish authors, as well as an interpretation of the reasons for choosing those verbs will be shown in Section 5.3.1.2. when dealing with verbs used according to the geographical provenance of authors.

In the group of History texts by Irish authors there are a few more verbs repeated. Among these verbs we have a huge difference in what regards the number of verbs used in the passive voice. We have a text with the verb “state” in the passive voice 27 times, that by Petrie (see example (165)). On the other hand, in the text by Thomas Leland the verb “call” is present just 5 times (see example (166)).

(165) (...) much of the matter stated by the later annalists (...) (Petrie 1839)

(166) (...) he was again called to the continent (...) (Leland 1774).

But what happens when analysing these texts together, as only one group? In this case, the verb “call” takes the lead with 75 cases, 3.9% of the verbs in the structure of the passive voice, as already seen in example (164). The next verbs in frequency go down to 39 cases for “give”, 2.02%, 33 cases have “find” (1.71%), and 31 for “say”, 1.61%, all of them represented in example (167), (168) and (169), respectively. The rest of

verbs do not reach 30 cases, for example “make” (29), “state” (27), “suppose” (26), “consider” (21), or “preserve” (16).

(167) (...) arms only were given (...) (Stock 1800)

(168) (...) the principal rules concerning which will be found in Br. Laws (...) (Orpen 1911)

(169) (...) what has been said in the preceding chapter (...) (Hardiman 1820).



Figure 13: Verbs in History texts by Irish authors

We can see that here the verbs repeated are not the same in the two groups. The focus should be now in observing the situation when putting both groups together to analyse the verbs. This way, as can be seen in Figure 16, the verb “call” appears 84 times, already seen in example (166), being 2.40%, “make” appears 69 times (1.97%), as in examples (163) and (164), and “give” 56, 1.60%, as shown in examples (162) and (167). As we have already seen in each of the sub-corpora individually, when they form the sub-corpus of History, the verbs repeated are fewer than in the Mathematics sub-corpus. In the Mathematics texts we had the verb “find” with a presence of nearly 4%, while in History, the highest percentage is for “call” with just below 2.5%. Besides, we do not see the same verbs repeated, as it happened with Mathematics.

Discussion

The variable geographical provenance of authors centres the next comparison. In this way, the first analysis is over a group of both Mathematics and History but with British authors only. This sub-corpus is formed by 167,641 words, where 2.02% are verbs in the passive voice. Here, as can be seen in Table 17, “call” is the verb that appears most of the times, with 120 cases, representing 3.54%. Example (144) above shows this verb in a Mathematics text; an example in a History text will be (168).

Verb typology in British authors	
VERBS	OCCURRENCES
call	120
find	95
take	89
give	85
make	60
express	53

Table 17: Verb typology in British authors

The next three verbs in times of appearance are “find” with 95 times (2.80%), “take” 89 times (2.62%), and “give” 85 times (2.50%). Examples of these three verbs were already seen when dealing with British mathematicians, since these were the most frequently used verbs in that sub-corpus, too. Examples of these verbs in History texts can be seen in (171), (172) and (173) below. The number of times a verb is repeated here goes down drastically, being the next verbs in frequency “make”, with 60 cases (1.77%), and “express” with 53 (1.56%)

(170) (...) as they are called, tryers (...) (Adams 1795).

(171) (...) seize the Traitors wherever they could be found (...)
(Bancks 1740)

(172) (...) he was taken and carried to Ferdinand (...) (Graham 1820)

(173) (...) was now given *carte blanche* (...) (Burrows 1895).

An approach to Irish texts, both Mathematics and History texts, shows that the number of total words is completely different from the previous one, with 179,334

words, and the percentage of verbs in the passive voice is 2.25%. As for the type of verbs which are more frequent here (shown in Table 18) I can state that with a total number of 107 cases, “call” is the verb leading the chart, (2.64%), followed by “give” with 99 cases (2.45%), “make” with 94 cases (2.32%), and “find” with 82 cases (2.03%). After these, we jump to 65 cases with “express” (1.60%), 63 with “consider” (1.56%), 60 cases with “take” (1.48%), and 54 with “suppose” (1.33%).

Verb typology in Irish authors	
VERBS	OCCURRENCES
call	107
give	99
make	94
find	82
express	65
consider	63
take	60
suppose	54

Table 18: Verb typology in Irish authors

The four most frequently occurring verbs here (call, give, make and find) have already been exemplified above. For “call” we have example (166) in a History text, and for a Mathematics text we have example (174) below. Cases from both History and Mathematics have been already given for the verb “give” in examples (155) and (167). The same happens with “find”, whose examples are (158) and (168). In the case of “make” we have already shown two examples from mathematician texts, (152) and (154); the use of this verb in a History text is shown in example (175).

(174) Such points are called *cusps* (...) (Salmon 1852)

(175) (...) so incessant use was made from early morning (...) (Stock 1800).

We can see that analysing the groups by country of origin, the verbs we get repeated are very basic verbs: “take”, “make”, “give”, “find”. These are delexical verbs, and as it will be explained later, the importance is not in the verb itself but in the noun that follows it.

What we have in all these groups, and texts, are many examples of hapax legomena. These verbs that are only used once in a text or in a group within our analysis form a longer list than those repeated. Verbs like “sell” in Graham (1820), example (176), “deduce” in Smith (1894), example (177), or “wam” in Young (1798), example (178), form part of this group.

(176) (...) the best works could be sold (...)

(177) (...) which were deduced from the theorem (...)

(178) (...) it is soon warned by pain (...)

I could not detect any differences in the use of the passive voice between Irish and British writers, regarding to the possible interference due to the possible influence of Irish on Irish writers. They use the passive voice in the same way and proportion, and there is no sign of any other structure, taken from the Irish language, to substitute the passive voice. It is essential to remember at this point the structure the passive voice has in Irish. Celtic and Germanic languages, as being from different origins, do not share grammatical structures, starting with the difference of word order, SVO for English (a Germanic language), and VSO for Irish (a Celtic language). And although in modern Irish there is a periphrastic construction (to be (*tá*) + verbal noun or verbal adjective) which can be considered as passive, the passive voice in Irish is built up in a synthetic way, with one verbal form and no need of auxiliary (or even agent). Such a big difference with the structure of the passive voice in English has, very probably, avoided the interference between the two structures.

It is necessary to see if all these verbs can lead to any different result, and therefore conclusion, when classified according to different criteria, and thus, a classification according to their function and meaning will be carried out.

5.3.1. Classification of verbs by function and meaning

All the verbs already mentioned can be grouped according to their function or meaning. Following Crespo (2012b: 208), what interests us for this analysis, are “those verbs used to convey and report ideas, concepts and discoveries, which is indeed the

central aim of all scientific writing.” And she offers a table with ‘a semantic taxonomy of verba dicendi’. Using this table (Table 19) with the data obtained in our analysis, we can see whether our authors make use of these verbs which are characteristic of the scientific language or they resort to different ones.

Verbs	Dixon (1992)	Levin (1993)	Biber (1999)	Filippo (1999)	Korhonen & Briscoe (2004)	Crespo (2010)
Primary B verbs (thinking type)	assume, believe, know, learn, realise, think, understand					
Primary B verbs (speaking type)	describe, inform, order, propose, remark, state, tell					
Assertive				hypothesize, insist, suggest		
Communication			ask, announce, call, discuss, explain, say, shout, speak, state, suggest, talk, tell, write			account, claim, communicate, exclaim, express, refer
Mental (describing both cognitive activities and states)			believe, calculate, consider, decide, discover, doubt, examine, know, learn, read, remember, solve, study, understand			ascertain, conclude, find
APPROVE					accept, object	prove
CONFESS					acknowledge, reveal	
INDICATE					demonstrate, imply	
DISCUSS					debate, argue	
SETTLE					agree	

Discussion

SHOW					demonstrate, quote	
LECTURE					comment, remark	
SUGGEST					propose, recommend	

Table 19: A semantic taxonomy of verba dicendi (Crespo 2012b: 209-210)

Making no distinction between discipline or country, the verbs most frequently used include part of those considered as reporting ideas or concepts and discoveries, as it was explained earlier on.

The list of verbs that occupy the top ten positions in descending frequency of occurrence is shown in Figure 14. We have the verb *call* in the first place, with a total of 227 cases (always in the passive voice, of course), which makes a total of 3.05% of the cases found in the whole corpus. In the second position stands the verb *find*, with 187 occurrences and 2.51%. The third verb in frequency is *give*, 184 cases and 2.47%, followed by *make*, with 152 examples and 2.04%. The fifth in the rank is *take*, with 141 cases and 1.89%, followed by *express*, 109 cases and 1.46%. Under 100 cases we have *consider* and *required*, both with 80 cases and 1.07%. The two verbs closing the rank go under 70 occurrences, *divide* having 68 (0.91%), and *draw* 66 (0.88%).

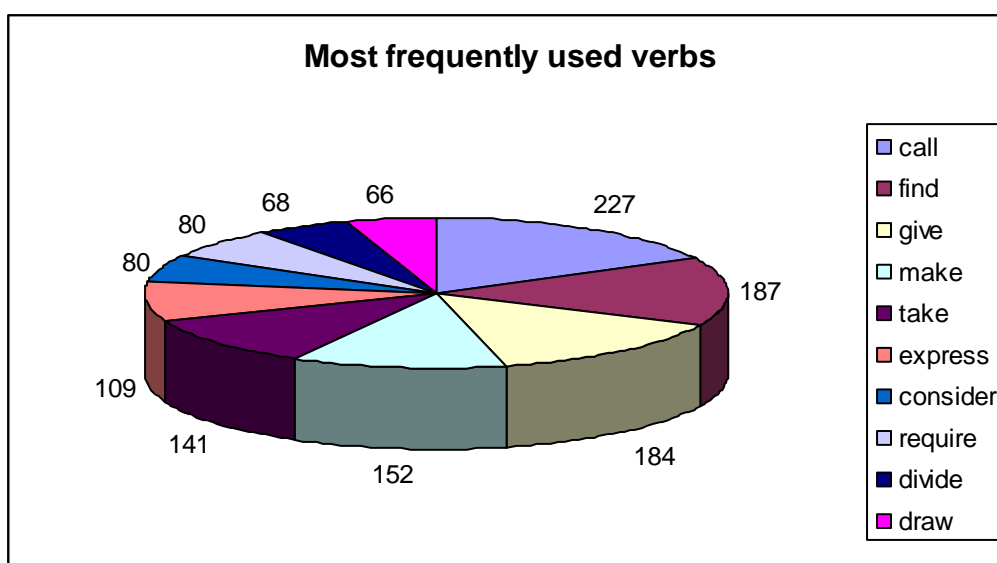


Figure 14: Most frequently used verbs

Within verbs, nearly half of them belong to that category of reporting ideas or discoveries, most of them with a very high number. Thus, we have *call*, *find*, *express*

and *consider* as representatives of that group, being the other six verbs related either to everyday actions, such as *give* or *make*, also as delexical verbs, or to the disciplines treated in the text, such as *divide* making reference to Mathematics. The main purpose of the scientific language is to express ideas and show discoveries; that is why those verbs related to these aspects are widely represented, as it is the same for those talking about a specific subject. That is the reason why a mixture of both forms the group of verbs most frequently used.

This is the situation and frequency of verbs considering the corpus together, but figures may vary if different sub-corpora are analysed on their own or in comparison with other sub-corpora. Discipline and geographical provenance of authors are the two different variables to be applied in this analysis.

5.3.1.1. Verbs according to discipline

We have just seen what types of verbs are most frequently used in the texts under survey. However, it is also interesting to see if this situation remains the same, or similar, when dealing only with one discipline.

As was previously observed, verbs are not used with the same frequency in Mathematics and History texts as Figures 15 and 16 below show.

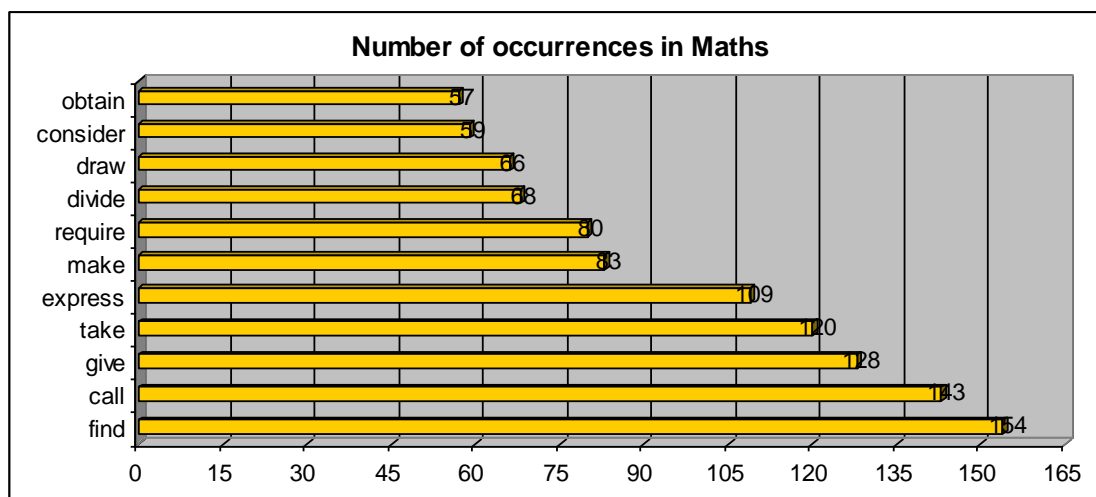


Figure 15: Most frequently used verbs in Mathematics texts

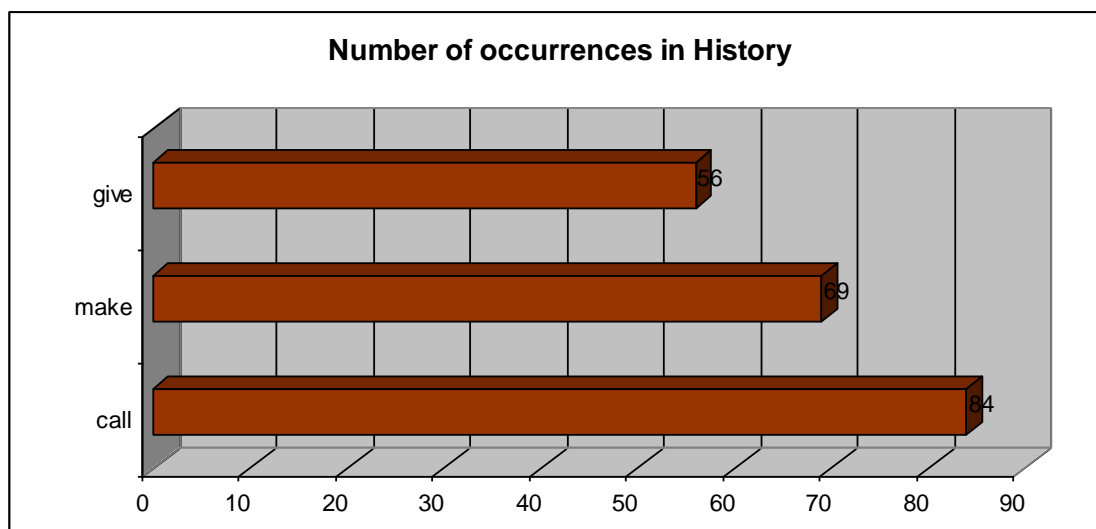


Figure 16: Most frequently used verbs in History texts

In the texts dealing with the discipline of Mathematics, we can see there are 11 different verbs which are used over 50 times; while in the discipline of History the number of verbs used over 50 times decreases to 3. What is interesting is the fact that the three verbs present in the texts of History, are also present in those of Mathematics, being their frequency, however, not the same. In the case of Mathematic texts, we can see that those eleven verbs which differ from the History texts are verbs related to the discipline of mathematics. As it was pointed out in Section 5.2.2., historians' tendency was to objectivity, to simply narrate facts in general, they were not dealing with specific aspects of analysis, as mathematicians did, and therefore, they did not need such amount of different verbs to repeat.

Out of the three verbs in the History texts, only one of them belongs to that group to report ideas, *call*, having the highest frequency, 84, but reporting only 2.40% of the verbs in the passive voice. This verb is mainly used for communication, and that is why, although being a verb fairly used, its frequency is not very high. The other two verbs belong to that other group I have defined as being part of every-day life. It is true they are not verbs related to any specific discipline; nevertheless, we could argue that History, being a discipline which talks about the life of people and places, could well make use of those verbs to narrate or explain what happened in the past. In that sense, these verbs would be considered as specific of the field or discipline.

In regards to the verb *call*, when looking for its meaning in a dictionary, the first option we get is “[transitive, often passive] to give somebody/something a particular

name; to use a particular name or title when you are talking to somebody” Oxford Advanced Learner's Dictionary. It is interesting that even before its definition we are told that this verb is normally used in the passive voice. It is not strange, then, to find it here leading the ranking of verbs in the passive voice. *Call* had the highest frequency in the whole corpus, and it is the first in History texts (example (179)) and the second in Mathematics (example (180)). Being a verb of communication and being often found in passive, it seems quite reasonable to find it on the top position.

(179) (...) a son, who [...] was called Alexis Petrowitz. (Bancks 1740)

(180) And such velocities are called fluxions (...) (Berkeley 1734)

As I have just explained, *call* is one of the leading verbs in Mathematics. Out of the eleven verbs in Figure 15, four of them belong to the group of reporting ideas, *find*, *call*, *express*, and *consider*. It is relevant the fact that although there are only four verbs out of eleven, these four verbs comprise almost half of the forms the eleven verbs show; 43.58% of the verbs in this chart are formed with these four verbs, and over a quarter, 27.83% are formed by the two first verbs, *find* and *call*. I have already explained the reason to find *call* in this place, but *find* is a different case. Based the information in Table 17, *find* belongs to mental verbs which describe cognitive activities and states. According to the Oxford Advanced Learner's Dictionary, one of its definitions is “to discover something/somebody by searching, studying or thinking carefully”. This is exactly what mathematicians do, and that is the reason why this verb is the top one in the list of Mathematics (example (181)).

(181) (...) it will be found that the number of remaining points is (...) (Salmon 1852)

The rest of the verbs belong to that group of verbs related to daily activities (as *make*) or the discipline of Mathematics, in this case, such as the verbs *divide* or *obtain* (examples (182) and (183), respectively).

(182) (...) is divided into two parts by a line (...) (Malcolm 1730)

(183) (...) the above result may be obtained with the help of (...) (Taylor 1872)

Discussion

As it happened in the group dealing with History, here there are some verbs that could be both for every-day life or specific for the discipline of Mathematics. Among these verbs we can include *give* or *take*, frequently used in mathematical problems as well as in normal activities.

(184) (...) one of the acute Angles is given (...) (Donne 1765)

(185) (...) earliest assent, which is given to testimony (...) (Young 1798)

5.3.1.2. Verbs according to origin

A last section dealing with the function or meaning of the verbs used, is that related to the origin of the author. As shown above, the different verbs used by authors differ depending on their nationality. In order to see it clearly, Figure 17 reflects the verbs most frequently used by British authors.

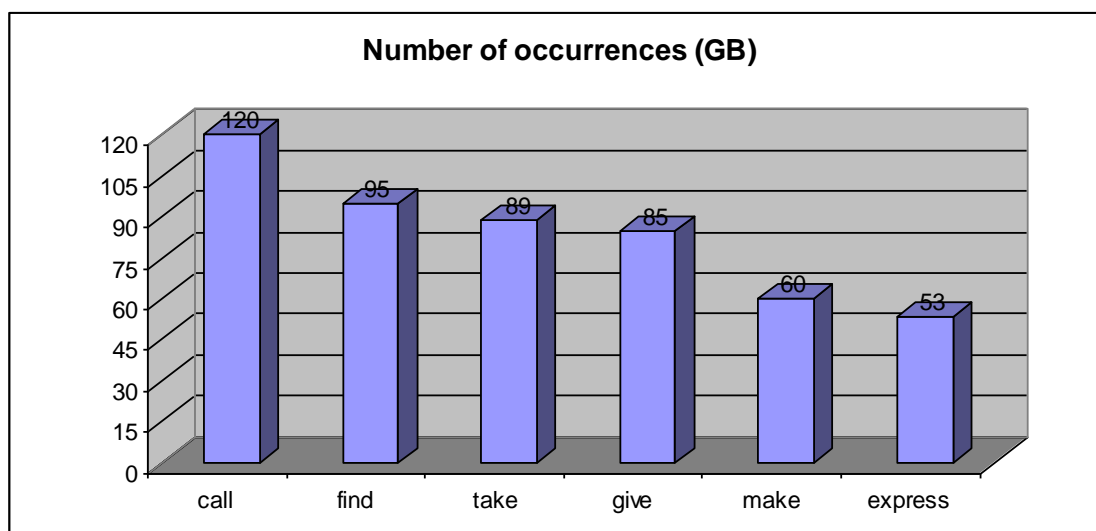


Figure 17: Most frequently used verbs in texts by British authors

What we can observe here is a short selection of verbs widely used by these authors. This is called lexical richness, understood, in Moskowich's words "as the degree of variety of terms used in particular texts" (2016: 112). As it was already stated, *call* is a verb for communication, what makes it logical to be in the first position, since the main purpose of the authors by writing their texts was to communicate something, no matter the discipline or type of text.

It could be stated that from these six verbs, half of them may be considered as verbs conveying and report ideas, concepts and discoveries, as Crespo pointed out (2012b: 208): *call*, *find* and *express*. The other three verbs (take, give and make) are pretty common verbs in the English language, in any field, so their presence among the most frequently verbs used seems to be expected. These three verbs are known as delexical verbs, being their characteristic the fact that the important part of the meaning is taken out of the verb and put into the noun (see example (186)-(188)). Being like this, it is quite reasonable that these verbs are very frequently used in the texts since they are not only focused of actions, but also in results, and these verbs are ideal to fulfil that purpose.

(186) The hint was taken (...) (Aikin 1833)

(187) (...) was now given carte blanche (...) (Burrows 1895)

(188) (...) but such a substitution cannot be generally made (...)
(Barlow 1811)

The verbs used by Irish authors, however, are more numerous, as shown on Figure 18.

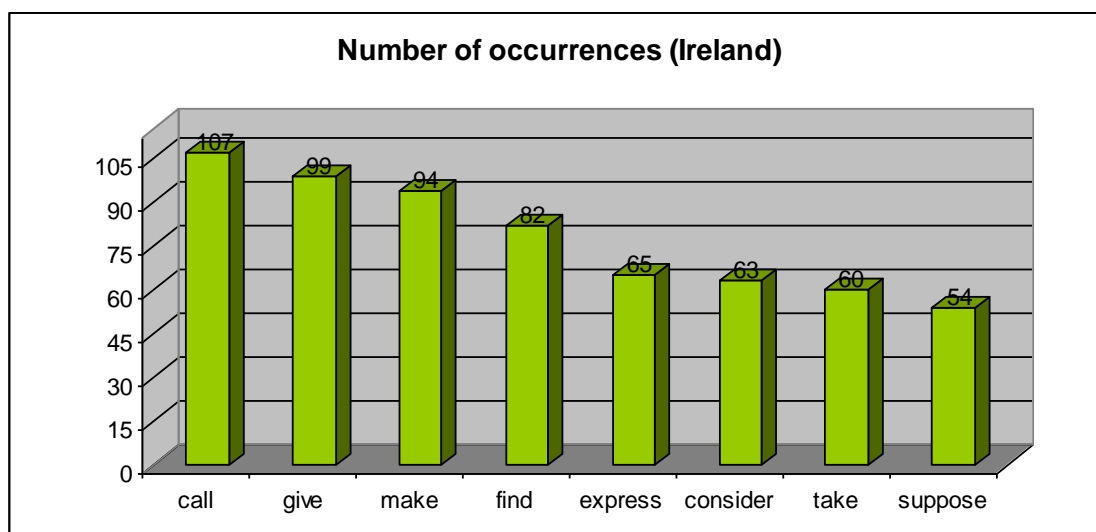


Figure 18: Most frequently used verbs in texts by Irish authors

If the British authors had a set of six recurrent verbs, in the samples written by Irish authors the number of verbs increases to eight (see Figure 18). *Call* is still the most frequently verb used. If in the British authors half of their verbs were considered to convey and report ideas, concepts and discoveries, a similar statement could apply to Irish authors. Out of the eight verbs, four can be included into that group: *call*, *find*,

consider and *express*. The rest include the three verbs with the highest frequency in the British authors (see Figure 17), plus the verb *suppose*, whose presence could be justified by its usage in the mathematics field, which could indicate more lexical richness in the British authors.

5.4. Other features of the verb phrase

Once we have analysed the verbs used by the different authors in their texts, it is also relevant to analyse other elements present in the verbal structure. Not only the verb in itself matters, but how it is formed, or its presence or lack of an agent, are also important in the formation of the whole structure.

Thus, the following subsections will deal with the use of the by-phrase, the reduced form of the passive verb, and the presence of modal verbs in the passive structure. There will be another subsection where examples of individual texts (in representation of different variables) will be analysed.

5.4.1. The by-phrase (and the truncated form)

Already in Chapter 3 the term “truncated” was introduced to describe those passive sentences which lack their agent. Likewise, in the analysis of texts we have seen there are many more cases of passive verbs without a *by-phrase* agent than with it. Less than a quarter of all the cases of verbs in the passive voice are full passives, which means that over three quarter of the cases have no agent. As stated by Rodman (1981), already mentioned in Chapter 3, it is not common for the English language to have full passives, and the use of the truncated passive is frequently associated with the scientific style. Figure 19 below shows that statement, since 79% of the passive sentences of the corpus are truncated passives.

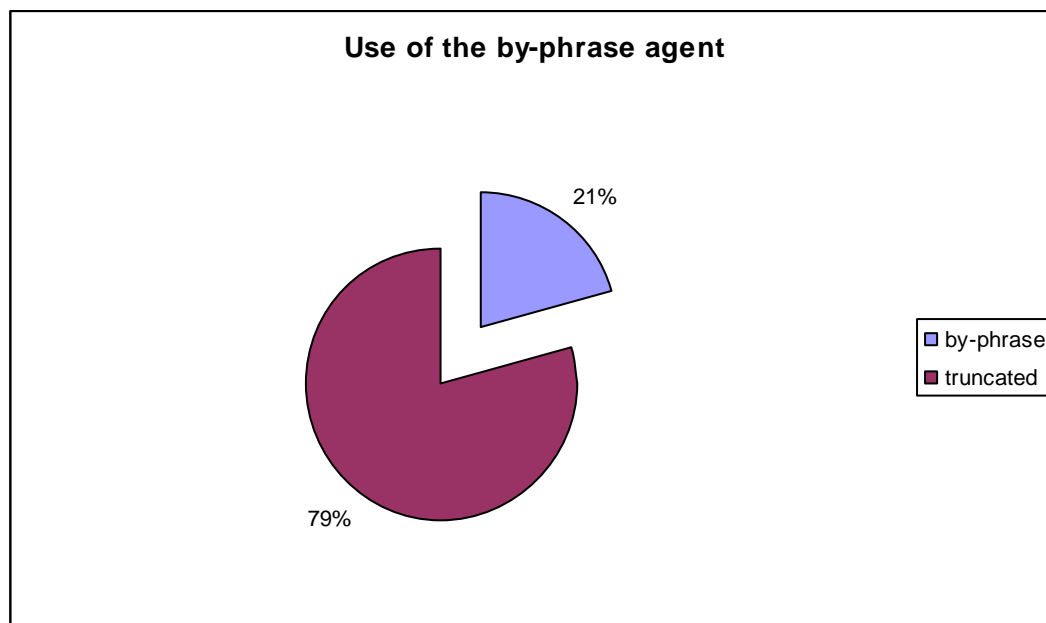


Figure 19: Use of the by-phrase agent.

If we take a look at the use of the *by-phrase* by the authors according to discipline and nationality, we will observe a slight difference in the amount of cases traced.

The use of the *by-phrase* agent is practically identical in the whole corpus. As the following table shows, there is no difference in the use of the agent in either a Mathematics (20.90%) or a History text (20.70%).

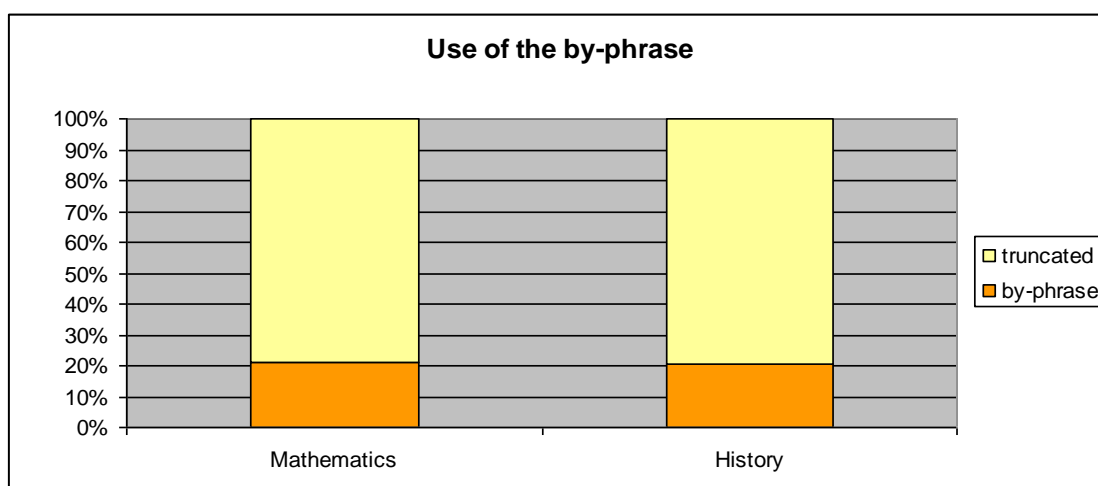


Figure 20: Comparison of the use of the by-phrase agent in Mathematics and History.

Discussion

However, when these two disciplines are divided, taking into account the origin of their authors, the situation changes. The following figure shows the use of the by-phrase agent depending on the provenance of the authors in Mathematics.

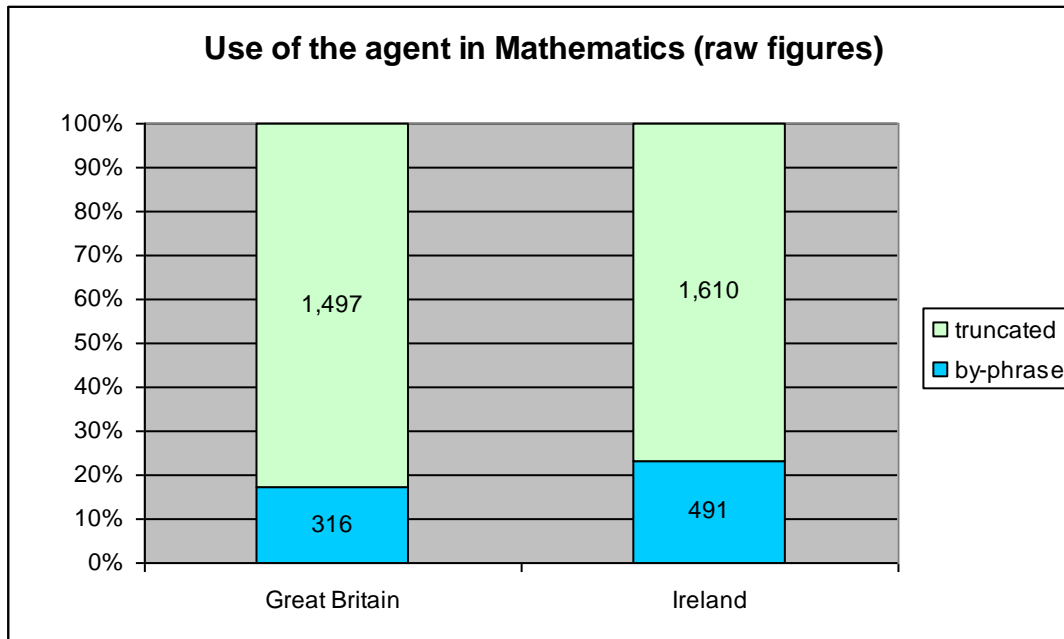


Figure 21: Comparison of the use of the by-phrase agent in Mathematics (raw figures)

Since all data has been given in normalised figures, Figure 22 shows the same information as Figure 21, but normalised to 10,000 words.

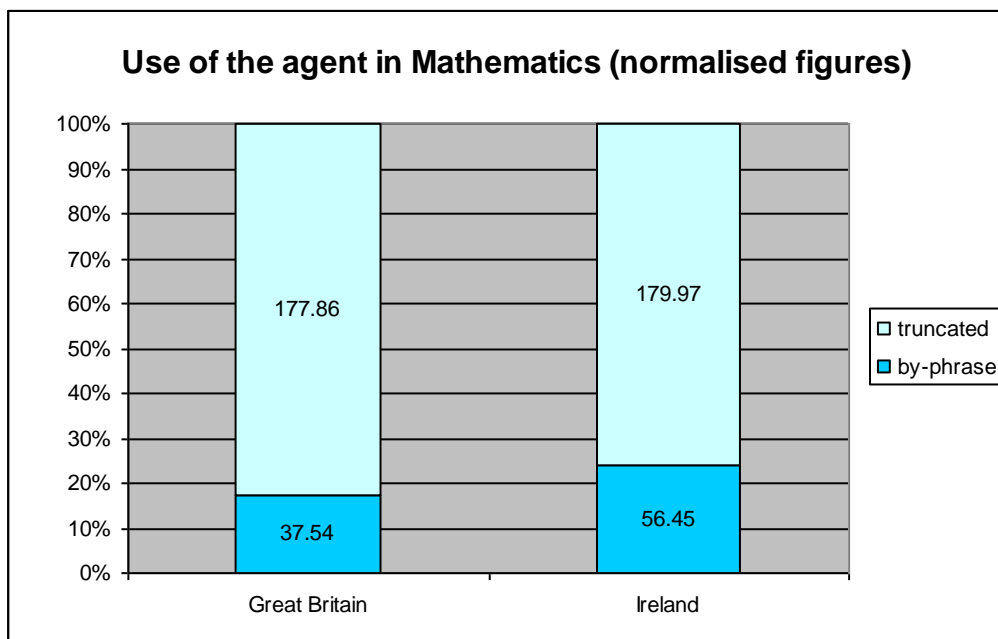


Figure 22: Comparison of the use of the by-phrase agent in Mathematics (normalised figures)

We have to take into account that the Irish sub-corpus has more words, and that is why it also has more cases of *by-phrases* agents. However, normalising figures to 10,000 the same difference is maintained, as can be seen in Figure 21. What is interesting is the fact that in the Irish of the eighteenth and nineteenth centuries, the passive voice was not used with an agent, normally; if mentioning the agent were necessary, the option would be to use the active voice. It should be worth mentioning that out of the 16 Irish authors, 8 of them were originally from Dublin, where (with possible exceptions) the use of the Irish language was not spread, and 3 more were from counties where that language was presumably dead (Antrim, Longford and Laois), as was pointed out in Section 4.3.2.. Taking this into account, it is very likely that these authors used the English language without interference from Irish, at least in this grammatical aspect.

Something similar happens when analysing the figures from authors in the discipline of History, as shown in the following Figures (23 and 24).

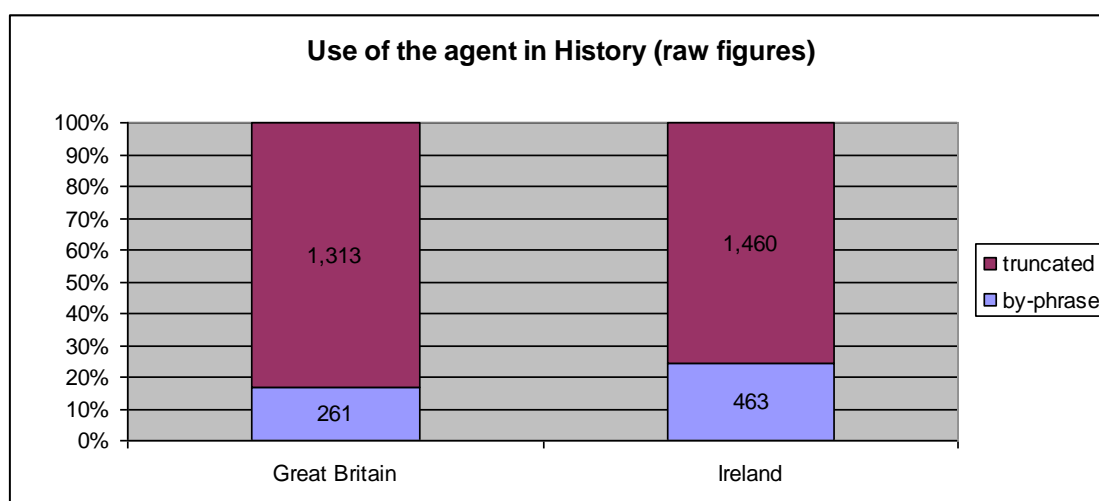


Figure 23: Comparison of the use of the by-phrase agent in British and Irish texts (raw figures)

Figure 24 shows the same data as Figure 23 but with normalised figures to 10,000 words.

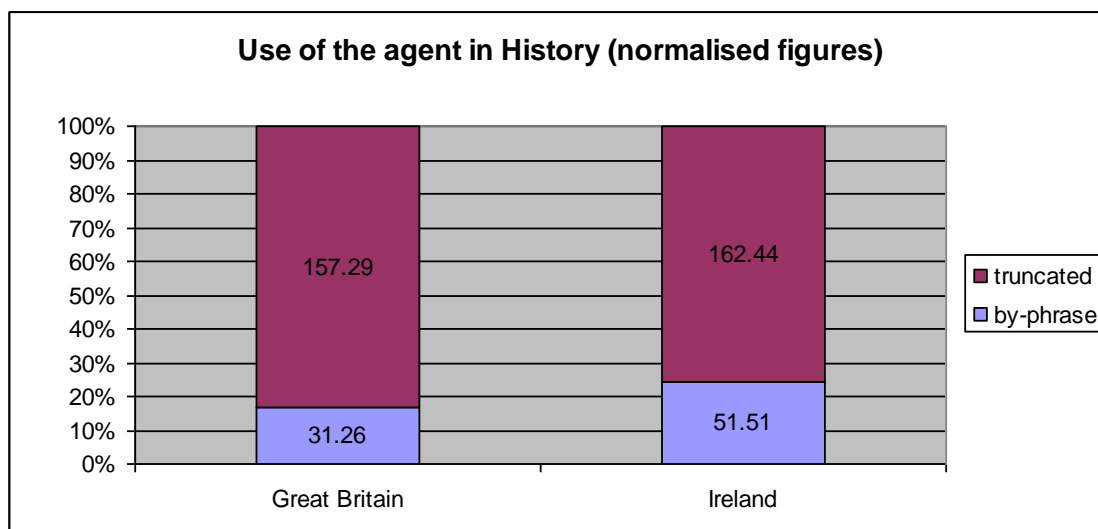


Figure 24: Comparison of the use of the by-phrase agent in British and Irish texts (normalised figures)

In both cases the Irish authors use the *by-phrase* in a greater percentage, around 24%, while the British authors only use the agent in 17% of the cases.

It is clear that there is no difference in numbers in the use of the *by-phrase* agent when comparing the two different disciplines; the difference appears when making the comparison according to provenance. As already stated in Section 5.2.1.1., although not knowing the reason for this difference, what it proves is the lack of influence of the Irish language over the Irish writers, since in Irish the tendency is to avoid the use of the *by-phrase* agent.

5.4.2. Reduced form of the passive voice

After seeing what happens with the use of the full or truncated passives, it is interesting to check if the same situation is present in the use of reduced or short forms of the passive, that is, those passive verbs with no presence of the auxiliary verb.

As done with the *by-phrase*, the first step in this section will be to see the amount of reduced forms and auxiliaries used in the corpus.

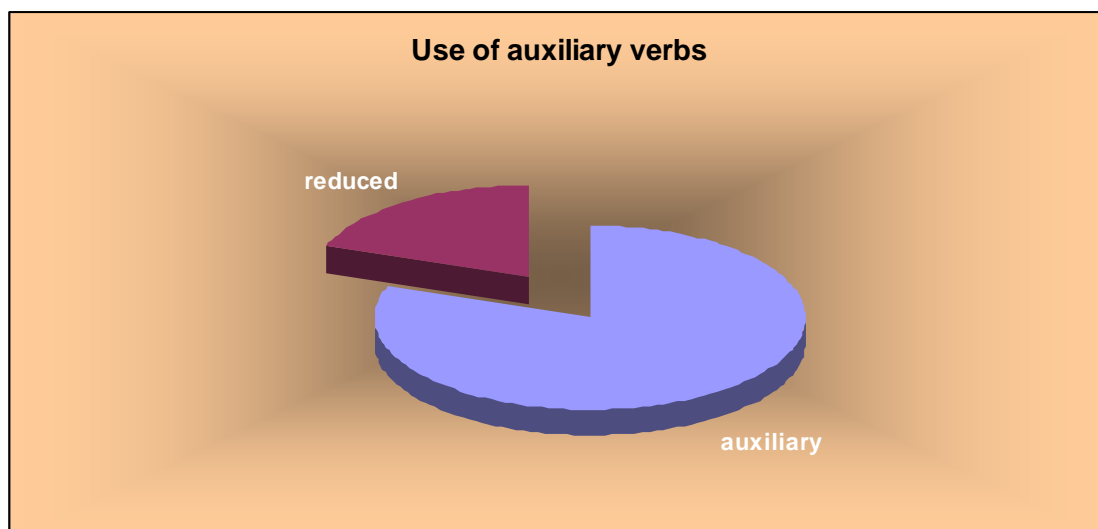


Figure 25: Use of auxiliary verbs in the corpus.

We can see in Figure 25 that over four fifths of the verbs in passive voice make use of an auxiliary verb (80.60%), something quite expectable. The point now is to see whether this percentage continues being like that when the verbs are separated by discipline.

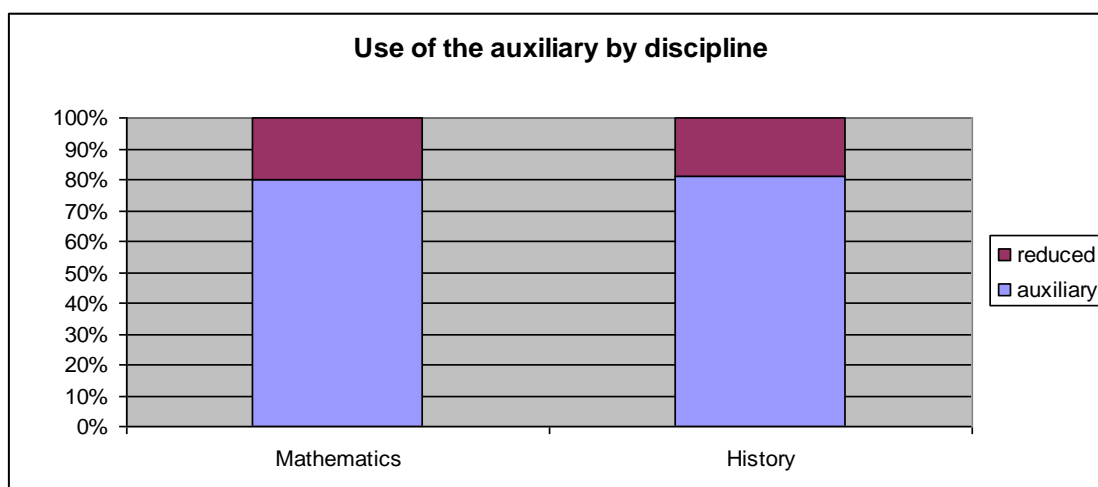


Figure 26: Comparison of the use of the auxiliary in Mathematics and History.

As it happened in the case of the by-phrase, the use of the auxiliary in the passive voice is very similar in the two disciplines, with 80.01% in Mathematics and 81.24% in History. It seems, then that the subject to be written about does not influence the use or not of an auxiliary in the passive voice.

Discussion

Nevertheless, the analysis of the discipline of Mathematics according to the provenance of authors sheds some new light on passive constructions usage, not only according to the figure above, but also with the results obtained with the *by-phrase*.

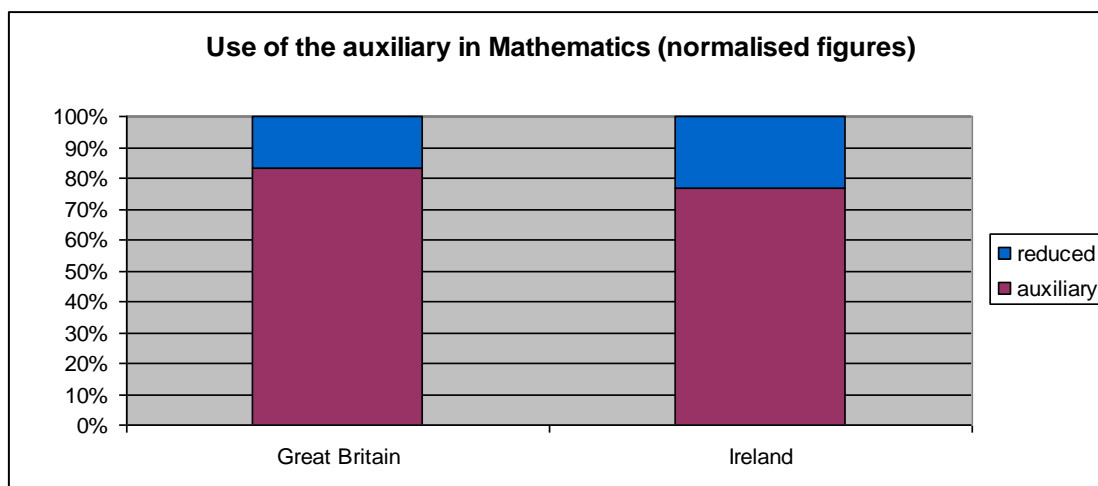


Figure 27: Comparison of the use of the auxiliary in Mathematics (normalised figures).

There are several points of difference in the percentage of use of the auxiliary between British and Irish writers in this discipline. The use of the auxiliary by British authors is near 85%, while Irish authors do not reach 80% of the occurrences when they use a passive verb.

Shockingly, when turning to the History discipline, not only there is no such a difference, but there is almost no difference at all. The percentage of the use of auxiliaries with the passive voice in the field of History is practically the same for both geographical provenances, around 81% (see Figure 27 below).

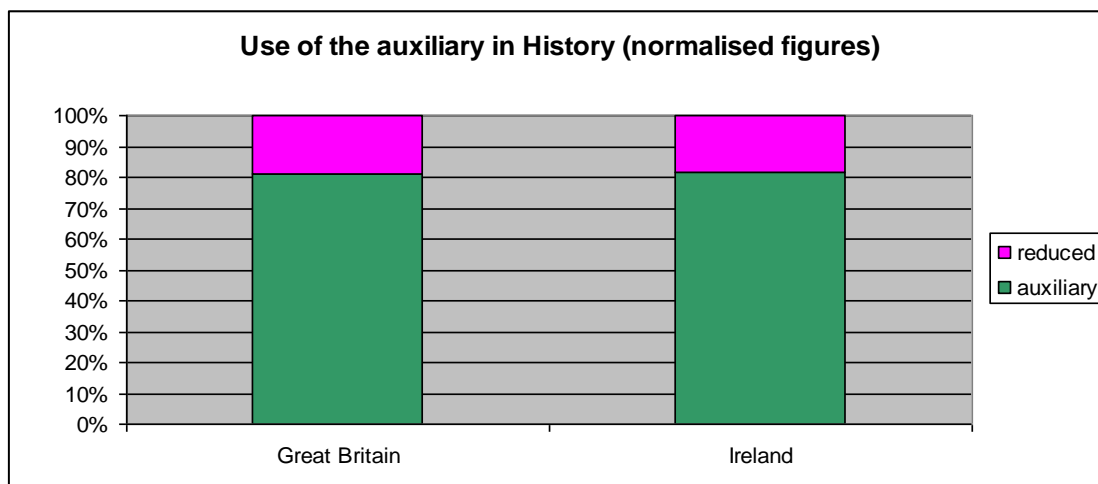


Figure 28: Comparison of the use of the auxiliary in History (normalised figures).

As we can appreciate, the only big difference lies in analysing authors according to their place of origin in the discipline of Mathematics. The reason for this fact is not clear, and might be caused by several reasons, including the specific subject to be treated within the discipline, a particular use by one author, or even the type of verb used in the passive voice.

5.4.3. Modal verbs

One more aspect to analyse in this section is the use of modal verbs. In the first section of this chapter I referred to the fact that due to the meaning of probability modal verbs have, there should be more modal verbs used in Mathematics than in History. This initial hypothesis seems to be fulfilled.

However, to have a complete vision of the different groups, a first approach will be to the whole corpus, in order to see the percentage of modals used with the passive verbs. This is shown below (Figure 29).

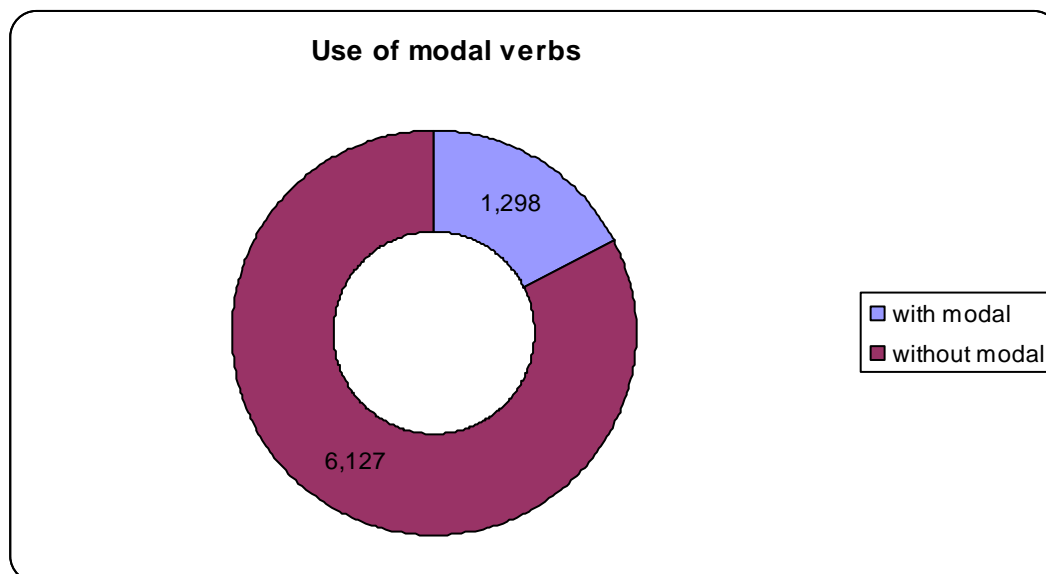


Figure 29: Use of modal verbs in the corpus.

Figure 29 attests to the fact that only 17.48% of the verbs in the passive voice occur together with a modal verb (either will, would, shall, may, might, can, could, or ought to).

Once the total number and percentage is stated, we need to see how these modals behave when analysed in only one discipline, starting with Mathematics, including both Irish and British authors. Following Ó Siadhail (1989), and Hickey (2009), the Irish language has different options to show possibility, that is, it can use different structures to say *can* or *must*, for example. However, according to the results obtained, Irish authors have not chosen those other structures to express possibility, and they have opted for modal verbs before a passive voice. The following figure (Figure 30) shows a very similar use by authors in the Mathematics texts, with a difference of less than 2 points in favour of those from British provenance.

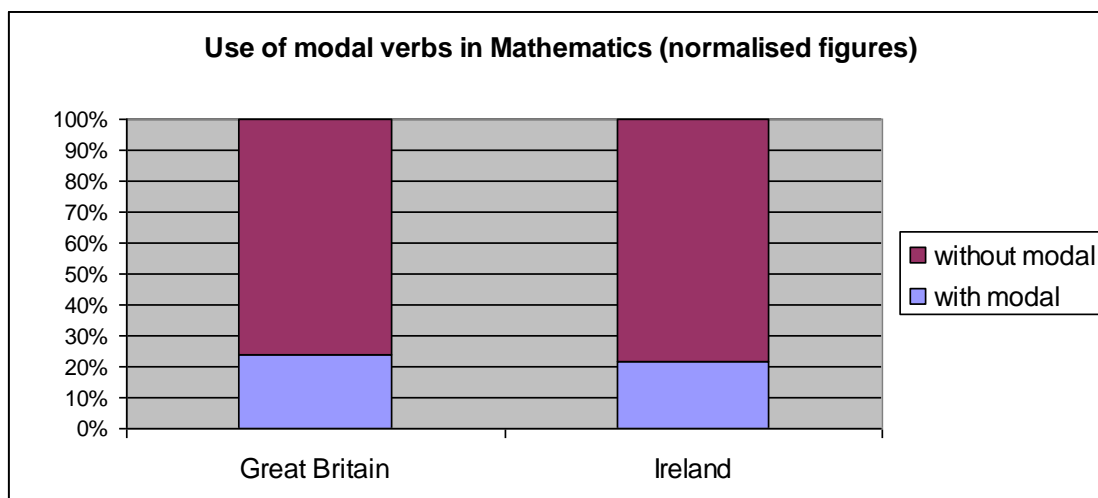


Figure 30: Comparison of the use of modal verbs in Mathematics (normalised figures)

That situation found in the modal verbs used in Mathematics is totally reversed in History, as exhibited in the Figure 31.

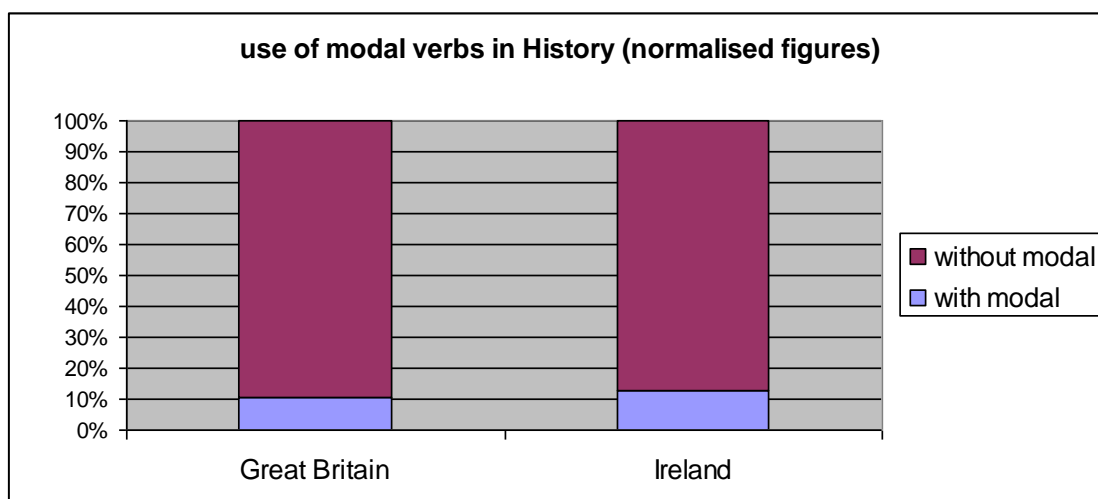


Figure 31: Comparison of the use of modal verbs in History (normalised figures)

In the case of History texts, that 2% of advantage is on the side of Irish authors. With these two figures we can observe that the variable of geographical origin of authors is not relevant for the use of modal verbs with the passive voice. We can say that the authors from both countries have the same use of modal verbs in these texts, with just over 17% in both cases.

However, the big difference, as it was initially presupposed, lies in the two disciplines, with Mathematics superseding the number of occurrences, as seen in Figure 32.

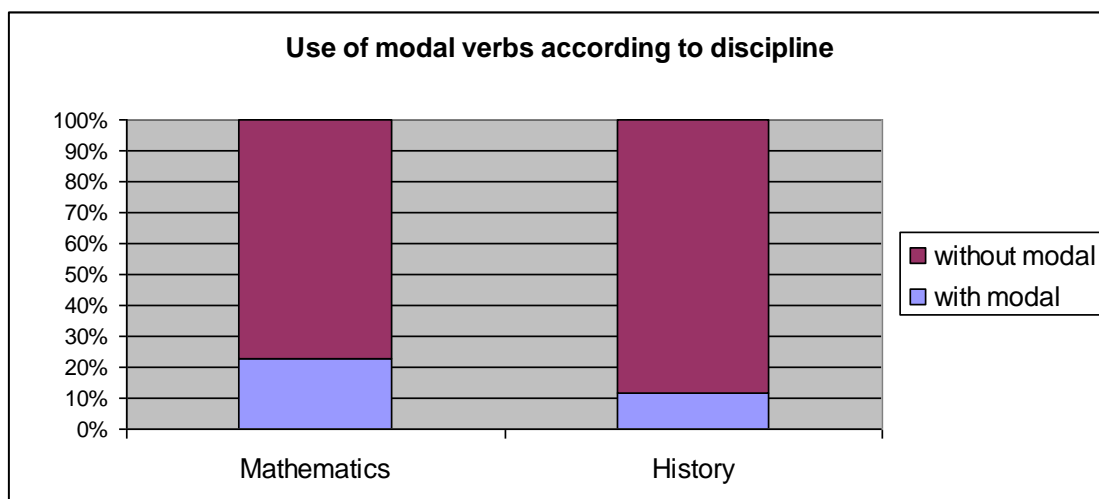


Figure 32: Comparison of the use of modal verbs in Mathematics and History.

The percentage of modal verbs used in Mathematics is 22.70%, while in History that figure goes down to only 11.60%. As stated earlier on, the reason for this higher use in Mathematics can be caused by the fact that some modal verbs have that sense of possibility, probability or uncertainty present in the hypothesis and theorems which fill the pages of Mathematics texts.

5.5. Passive structures in individual authors

All possible variables have been taken into account to compare different sub-corpora, so the last analysis will be done with individual authors from different places of origin.

In order to see if there is any difference between authors with a probability of having another mother tongue, apart from English, I have selected two Irish authors (Joseph Stock and James Hardiman), and three British authors (Thomas Birch, John Adams and Maria Graham).

The four of them belong to the discipline of History and to a similar period (1760-1820), the end of the eighteenth and the beginning of the nineteenth century. On

the one hand, within Irish authors, James Hardiman is likely to have learned Irish as a mother tongue, or at least to have used it quite often, due to his place of origin, county Mayo (Moore 1890). The other one, Joseph Stock, being from Dublin, may have had not the chance of having the Irish language as part of his early education. We can suppose that living in Dublin at that time (he was born in 1740), his contact with the Irish language would have been intentionally on his part. Since there are no records of this fact, and since Irish was not really spoken in Dublin anymore (it was the first place where the language disappeared) it is very unlikely that he could speak Irish.

On the other hand, the British authors have also different backgrounds. John Adams was originally from Aberdeen, in Scotland, and although we have already seen that the spread of the Gaelic Scottish language at that time was reduced to the northern part of Scotland, we cannot be a hundred per cent sure of his personal background, so I will consider him as having a slight probability of having some knowledge of that old language. Another author chosen in this group is Thomas Birch, from London. And the third option will be an English woman, Maria Graham, in representation of female authors.

The following table (Table 20) shows a summary of what was found after the analysis of the texts.

	IRELAND		GREAT BRITAIN		
	Joseph Stock	James Hardiman	Thomas Birch	John Adams	Maria Graham
words	10,182	10,259	10,048	10,120	10,061
passives	197	205	173	191	189
by-phrase	41	42	55	58	42
reduced	31	51	57	21	48
hidden aux	9	3	6	7	9
modals	20	22	2	19	18

Table 20: Results found in individual texts.

It is easy to observe at first glance that there is not a big difference among authors. However, there are some slight differences, and in order to see them, I will study these uses in some detail.

The number of words in each author is very similar, and this is due to the criteria already mentioned in Chapter 4. All the texts comprise around 10,000 words,

Discussion

and the number of passives present in each one does not differ a lot. For this reason the results offered in this subsection will correspond to raw figures, without normalising them. The percentage of passives varies from 1.72% (Thomas Birch) to 1.99% (James Hardiman).

Another feature worth mentioning as anticipated in Chapter 3, when dealing with the passive voice in Irish, showing the agent in the passive voice is not frequent (Ó Sé & Sheils 2001), and that could be the reason why the two Irish authors use less *by-phrases* than the British ones. Although, as seen some sections before, the use of the by-phrase agent was higher in the case of Irish authors than in British ones, we should point out that one of these Irish authors, James Hardiman, is originally from a county where Irish was still widely spoken at the time, county Mayo, and it is very likely it was also his mother tongue, taken into account that he was also known by his name in Irish, Séamus Ó hArgadáin. Thus, all that might reveal some kind of influence of Irish on this author.

The use of truncated passives in Irish authors is over 79% in both cases. In the case of British authors, Thomas Birch has the lowest percentage of truncated passives, with 68.2%, followed by John Adams (69.6%), and Maria Graham (77.77%). With these results we can take as certain the statement by Jespersen, who says that “over 70 percent of passive sentences found in English literature contain no mention of the active subject” (Jespersen, 1933: 121), where *literature* means anything written.

Another value in the table is that about the use of the reduced form of the passive, that with no auxiliary, only the past participle of the verb. In some cases the auxiliary is ‘hidden’, as it appears in the table, which means that although it does not accompany the verb, it is present in the text, normally with another verb in a coordinate sentence, as in “much has been said and written on both sides” (Hardiman 1820), or “it was altered and improved in every particular” (Graham 1820). These cases, however, have been considered as with no auxiliary for the count of the occurrences.

Therefore, the percentage of these reduced forms of the passive voice range from 32.94% in Birch, to 10.99% in Adams, with 25.39% in Graham, 24.87% in Hardiman, and 15.73% in Stock. There is a big difference in these results, but once again, apparently, there seems to be no clear reason for this personal option; not even the country seems relevant, although the highest percentages correspond to the English authors. The Scottish author, on the contrary, occupies the last place in the use of

reduced forms, he uses auxiliaries in nearly 90% of the passive constructions. Shocking as it may seem, this is not a relevant factor to determine any influence, since the Scottish Gaelic does not have any difference with English in the use of auxiliaries in the passive voice.

The last aspect in the table refers to the use of modal verbs within the passive structure. The outcome we achieve when analysing modals in the different groups was that Mathematics texts doubled the cases of those in History, and in what regards authorial provenance, the use of the modal verbs was the same. That percentage was not exactly the same in the two disciplines, with Irish writers dealing with the discipline of History using modal verbs 2% more frequently than British, and the opposite in Mathematics. The authors selected for the individual analysis belong to the History field, so it is presumable that Irish writers of science would use more modals than British authors. That is what is going to be checked in the following paragraphs.

None of the British authors reaches 10% of modals in their texts (Adams 9.94%, Graham 9.52% and Birch only 1.15%). However, the two Irish authors are over that 10%, not much, but over it (Stock 10.15% and Hardiman 10.73%). Therefore, although the difference is hardly imperceptible, Irish authors keep this tiny that advantage in the use of modal verbs.

As it happened when dealing with the whole corpus or different sub-corpora, although there are differences, the gap is not that big in several aspects of the analysis, and there is little variance between the analysis of a group and that of individuals.

All the analysis has been done and different results have been reached. The point has been to discover whether the premise of some influence of Irish over English on writers of science immersed in different linguistic environments can be tested or not in the use of passive constructions in our corpus.

The following chapter will show the conclusions reached after examining all the results obtained in the different analyses and comparisons carried out throughout the last chapters.

CHAPTER 6. CONCLUSIONS

The definition by Lehiste (1988:1) given in the first chapter, “language contact takes place between speakers of different languages in contact situations” has been the key aspect in all this work. The aim of this study was to see whether a second language (in number of speakers), Irish, had some influence in the use of the passive voice in English writing. Nowadays, we know that this influence on the way people in Ireland speak or write in English is present, mainly in vocabulary and grammar (Ashwell 2018, Hickey 2002, Ó Corrain 2006).

Just to make a brief summary, we can point out the presence in the English language of words coming from Irish: “What’s the *craic*?” meaning “What’s going on?”, or the word *dáil* to refer the parliament; and in grammar we can observe the well-known case of the *after perfect*, one of the main characteristics of the English spoken in Ireland (Ó Corrain 2006): “I am after cooking dinner” meaning “I have cooked dinner”. There are also influences in the pronunciation of words or the stress of syllables in certain words.

However, the focus of this work was on the passive voice, formed completely different in Irish, where some authors even argue about the existence of a proper passive voice. For this analysis, I have chosen several features around the passive voice, such as the verb used as auxiliary, the presence or not of that auxiliary, the use of modal verbs within the passive structure, and the use or not of a by-phrase agent. All of

Conclusions

them of course, together with the use of the passive voice itself, that is, the frequency with which the writers selected used the passive, and the type of verbs used.

Following the order mentioned above, the verb used as auxiliary in the passive voice will be the first aspect here. In Chapter 3 there was a section dealing with the different verbs that could act as auxiliary in the passive voice, *to be* and *to get*, with different requisites or implications according to several authors. However, the texts analysed have only one example of a passive voice with the verb *to get* as auxiliary, which means 0.01% of the cases. This supports the idea of some (González & Pérez 2001) that *get-passives* are not really passives as *be-passives* are; and the idea of others (Lakoff 1971, Palmer 1987) that *get-passives* are more colloquial than *be-passives* and are not very frequently used in the written language, and even less in scientific language. Surprisingly, there are other verbs which do appear as auxiliary, although only in four occasions; those are the verbs *become* and *seem*, which belong to the group known as *verbs of being*, and that is why on some occasions they can be interchanged with no alteration in the meaning and function in the sentence.

Once the auxiliary verb is clear, the next step is whether this auxiliary is present in the passive structure or not. Over three quarters of the structures go together with the auxiliary verb, and although the percentage is a bit lower in the case of Irish writers, the difference in the Mathematics field is not enough to conclude a different scheme; the samples in the corpus seem to follow a similar pattern.

In what refers to the use of modal verbs, the conclusion reached is not different from the presupposition made before the analysis (initial hypothesis). As stated above, if one of the meanings of modals is possibility or probability, it is very likely that texts related to Mathematics will have more modals than those about History, because the former deal with hypothesis and theories, something not “sure” but likely to be true, at least, until it is tested. Mathematical texts doubled the use of modal verbs in the passive structures. The difference in this aspect lies only in the discipline chosen, not in the language or origin the writer might have, since the use of modals in Irish and British authors is the same. In the Irish language, as seen earlier there are different structures to imply that sense of probability or possibility given by modals, but Irish authors have chosen the modal verbs in the same degree as the British ones.

The last aspect analysed in the structure of the passive voice was the use of the agent by means of a *by-phrase*. At this point it is important to remember how the

passive voice in Irish worked. In the Irish language of the eighteenth and nineteenth centuries the passive voice was used when the agent was not to be mentioned, using the active voice otherwise. If the Irish authors would be influenced by the Irish language, the presence of the by-phase as agent would be insignificant in the texts. However, the results show the opposite situation. Taking all the texts as a whole, the percentage of *by-phrases* used is nearly 21%, something quite reasonable considering these are scientific texts in which what stands out is the action, the event, and not the author or agent. And the same proportion can be seen when the texts were analysed in sub-corpora according to the variable discipline. Nevertheless, this percentage goes down if the sub-corpus analysed is that composed of British authors, and it increases in the case of Irish writers. The difference between these two groups is nearly 7%, something which is contrary to what was thought beforehand. Here we can see that the Irish language not only did not affect English, but it also made a clear difference between the two languages, as if they wanted to establish a clear boundary between them.

According to the results presented, in what refers to the different elements on the structure of the passive voice, we can conclude that there is no influence of the Irish language over the structure used in Irish writers. Moreover, if the similitude is almost exactly in the use of most of the elements, the biggest difference between British and Irish is not ruled by an aspect typical of the Irish language, but completely the opposite, since the agent in Irish would hardly appear because writers would use the active voice instead.

If the use of the agent in the form of a by-phrase differs from what it should be expected, it might be thought, that the use of the passive voice would be less numerous in the Irish texts (considering the same rule of preferring the active over the passive voice). However, contrary to this, Irish texts do not exhibit less passive voice verbs than British ones; they have some more, actually, although the difference is not relevant.

Therefore, I have not traced any kind of influence of Irish in this case either. Similar percentages can be seen when the texts are divided into disciplines, so it is easy to conclude that no matter the discipline or origin, the English scientific register used by all the authors is the same.

The last aspect present in the discussion was the different types of verb used by authors. Here it is necessary to recall those verbs which are used to convey and report

Conclusions

ideas, concepts and discoveries, and which were in a percentage of more or less 50%. These verbs, taking into account that only those with a frequency over 50 occurrences in each of the different sub-corpora were considered, were *call*, *find*, *express* and *consider*, with different frequencies of occurrence in each sub-corpus. Out of these four, *call* was the one most frequently used, both in the whole corpus and in the different sub-corpora, only surpassed by *find* in one sub-corpus, that of Mathematics. As it was stated before, this is a verb of communication, and that is the reason for its high presence in the texts, over 3% of the total.

Looking for differences between countries again, the same verb *call* takes the lead in both sub-corpora; however, Irish authors use the four different verbs to convey ideas, while the British writers only use three, not using *consider* in such high degree. They also use fewer verbs than the Irish authors with a frequency of over 50 cases. The reason for this difference in the number of verbs might be due to the different number of words in both languages. The Irish language has fewer words, and verbs, than the English language, which means different meanings are condensed in one same word, or verb in this case; therefore, when the Irish authors write in English, they would tend to use a higher number of verbs since they can choose from a wider variety than in the Irish language, they own more lexical richness.

These conclusions were made taking into consideration data from a group of authors, so the conclusions could be different when taking into account only one individual, as done in Chapter 5. In this case the analysis was done with five authors, and some of the results differed from the ones obtained with the group.

Most of the results in the sub-corpora coincide with those arisen from individual writers, and some, although a bit different, are not relevant enough to be mentioned. However, there is one aspect which turns to lead the opposite result, the use of the *by-phrase* as an agent. The result obtained in the analysis of the British and Irish corpora led us to the conclusion that, although the Irish language would not tend to use the *by-phrase* to represent the agent but to use the active voice, Irish writers have no influence on the way they use English in this aspect, and, what is more, their use of the *by-phrase* was higher than in texts written by British authors. Nevertheless, the result obtained on the analysis on individual writers shows that the use of the *by-phrase* construction in the two Irish authors is not as frequent as it is in the sub-corpus of Irish writers. It is

needless to remember that at least one of these two Irish authors was from an Irish-speaking area with a high probability of knowing and using the language himself.

Therefore, although the influence of the Irish language is present in some authors, that is not enough to prove such influence in the English language used by the Irish authors as a group.

The main objective of this work was to see up to what extent Irish had influenced English in the eighteenth and nineteenth centuries through the use of the passive voice. The principal conclusion we can reach is that there is no such influence present in the texts forming the corpus selected. Some small influences can be seen in certain aspects or authors, but they are not enough to point them as something relevant in the language.

Another possibility pointed out in Chapter 1 was the influence the Scottish Gaelic could have on the English language, since Scottish Gaelic has the same origin as the Irish language. Since the beginning this probability seemed very unlikely due to the evolution of Scottish and the places of origin of Scottish authors in the corpus. No sign of that possible influence has been observed, neither in the British sub-corpus nor in the individual analysis of authors, as it was initially supposed. Only a difference was found in the use of auxiliaries, but that was not a characteristic of Scottish or Irish that could prove an interference.

In general terms, in the case of the passive voice, no influence of Irish language on the English scientific register has been traced in the authors included in the corpus. This might be due to the great difference in the structure of both languages, or simply because the authors did not have a good command, or any command at all, of Irish, so the language could not influence them in any sense in order to alter English, probably their mother tongue in the majority of cases.

Despite the fact that English is currently influenced by Irish, that may have not happened in all registers. My results seem to indicate that the passive voice might have been left aside of that influence, especially in the scientific discourse of the eighteenth and nineteenth centuries, with both languages maintaining their structures and usage.

This study has been done using a small sample. Future research could include a bigger corpus of analysis, taking into account more authors or more disciplines. Other aspects related to the passive voice could also be taken into consideration for future

Conclusions

work. Among these other aspects, we could include the comparison in the use between the active and the passive voice, or the different text-types used by authors. The choice in the type of texts would also determine the audience authors have in mind when writing, which could also be a variable for an analysis.

The passive voice is an enormous field of study, and that is why trying to cover everything related to the topic is practically impossible. This a specific study with some specific objectives, or at least that was my intention when doing it.

REFERENCES

- Auer, A., Peersman, C., Pickl, S., Rutten, G., & Vosters, R. (2015). Historical sociolinguistics: the field and its future. *Journal of Historical Sociolinguistics*, 1(1), 1-12. <https://doi.org/10.1515/jhsl-2015-0001>
- Åfarli, T. A. (1989). Passive in Norwegian and in English. *Linguistic Inquiry*, 20(1), 101-108.
- Aitken, A.J. (1984, 2015). Scots and English in Scotland. In Aitken, A.J., Ed. Caroline Macafee, *Collected Writings on the Scots language* (2015), [online] Scots Language Centre [http://medio.scotslanguage.com/library/document/aitken/Scots_and_English_in_Scotland_\(1984\)](http://medio.scotslanguage.com/library/document/aitken/Scots_and_English_in_Scotland_(1984)) (accessed DATE). Originally published in Peter Trudgill ed., *Language in the British Isles* (Cambridge University Press, 1984), 517–532.
- Akimoto, M. (2000). Two types of passivization of ‘V+NP+P’ constructions in relation to idiomatization. In T. Fanego, M. J. López-Couso & J. Pérez-Guerra (Eds.) *English Historical Syntax and Morphology. Selected Papers from 11 ICEHL*. (pp. 9-22). John Benjamins. <https://doi.org/10.1075/cilt.223.04aki>
- Algeo, J. (2010). *The Origins and Development of the English Language*. Wadsworth Cengage Learning.
- Altholz, J.L. (Ed.) (2000). *Selected Documents in Irish History*. M.E. Sharpe. <https://doi.org/10.4324/9781315700830>
- Anderson, R. E. (2004) Hellins, John (d. 1827). (Revised by Adrian Rice). *Oxford Dictionary of National Biography*. Oxford University Press. <https://doi.org/10.1093/ref:odnb/12873>
- Appel, R., & Muysken, P. (1989). *Language Contact and Bilingualism*. Edward Arnold.
- Ashwell, T. (2018). ‘The car is washed by Tom’ – A corpus-based investigation into the passive voice. *Journal of Media Studies*, 23, 57-70.
- Atkinson, D. (1998) Scientific Discourse in Sociohistorical Context. *The Philosophical Transactions of the Royal Society of London, 1675-1975*.
- Attis, D. (2004). Sir William Petty and the Mathematical conquest of Ireland. In D. Attis (Ed.). *Science & Irish culture* (pp. 51-76). The Royal Dublin Society.
- Bailey, R. W. (2007). The Ideology of English in the Long Eighteenth Century. In M. Dossena & C. Jones (Eds.). *Insights into Late Modern English*. (pp. 21-44). Peter Lang.

- Bailey, R. W. (2010). Variation and change in eighteenth-century English. In R. Hickey (Ed.). *Eighteenth-century English. Ideology and change* (pp. 182-199). Cambridge University Press.
- Banks, D. (1990). Agents and instruments in scientific writing. *Iral*, 28(4), 336-345.
- Banks, D. (2008). *The development of scientific writing. Linguistic features and historical context*. Equinox.
- Barbe, L. (2010). *Francis Ysidro Edgeworth: A Portrait With Family and Friends*. Edward Elgar.
- Bazerman, C. (2011). Church, state, university, and the printing press: Conditions for the emergence and maintenance of autonomy of scientific publication in Europe. In B. L. Gunnarson (Ed.). *Languages of science in the eighteenth century* (pp. 25-44). Mouton de Gruyter.
- Bede. (731). *Ecclesiastical History of England*. [Giles (Trad.)]. (A. M. Sellar, 1907). George Bell and Sons.
- Beedham, C. (1981). The passive in English, German and Russian. *Journal of Linguistics*, 17, 219-227. <https://doi.org/10.1017/S0022226700007039>
- Bennett, P. (1980). English passives: a study in syntactic change and relational grammar. *Lingua*, 51, 101-114. [https://doi.org/10.1016/0024-3841\(80\)90001-7](https://doi.org/10.1016/0024-3841(80)90001-7)
- Blackhall, S. (1986). Lady's Choice. *Lallans. The Magazine for Writing in lowland Scots*, 26.
- Blevins, J. P. (2003). Passives and impersonals. *Journal of Linguistics*, 39, 473-520. <https://doi.org/10.1017/S0022226703002081>
- Boland, P. J. (2000). William Sealy Gosset ('Student'), 1876-1937. In K. Houston (Ed.). *Creators of Mathematics: The Irish Connection*. (pp. 105-112). Dublin College University Press.
- Borsley, R. D. (1988). A note on impersonal passives. *Journal of Linguistics*, 24, 483-487. <https://doi.org/10.1017/S0022226700011877>
- Breatnach, L. (1994). An Mheán-Ghaeilge. In K. McCone, D. McManus & C. Ó hÁinle (Eds.). *Stair na Gaeilge* (pp. 221-333). National University of Ireland, Maynooth.
- Brightland, J. (1712). *A Grammar of the English Tongue*. R. Brugis.
- Brinton, L. J., & Arnovick, L. K. (2006). *The English Language. A Linguistic History*. Oxford University Press.
- Brown, G. (1851). *The Grammar of English Grammars*. Samuel S. & William Wood.

- Bullions, P. (1846). *The Principles of English Grammar*. Pratt, Woodford & Co.
- Butterfield, H. (1959) *The origins of modern science. 1300-1800*. The Macmillan Company.
- Bynon, T. (1977). *Historical Linguistics*. Cambridge University Press.
- Cahan, D. (2003). Looking at Nineteenth-Century Science: an Introduction. In D. Cahan (Ed.). *From Natural Philosophy to the Sciences. Writing the History of Nineteenth-Century Science*. (pp. 3-15). The University of Chicago Press.
- Cajori, F. (1919). Attempts made during the eighteenth and nineteenth centuries to reform the teaching of geometry. *The American Mathematical Monthly*, 17(10), 181-201. <https://doi.org/10.2307/2973645>
- Cajori, Florian. (1921). The spread of Newtonian and Leibnizian notations of the calculus. *Bulletin of the American Mathematical Society*, 27, 453-458. <https://doi.org/10.1090/50002-9904-1921-03471-9>
- Cambridge Dictionary Online. <https://dictionary.cambridge.org/es/gramatica/british-grammar/modality-meanings-and-uses>
- Cannell, D. M. (1999). George Green: An Enigmatic Mathematician. *American Mathematical Monthly*, 106 (2), 136–151. <https://doi.org/10.2307/2589050>
- Cannell, D. M., & Lord, N. J. (1993). George Green, mathematician and physicist 1793–1841. *The Mathematical Gazette*, 77(478), 26–51. <https://doi.org/10.2307/3619259>
- Carnie, A. (2012). Scottish Gaelic Grammar. *Scottish Gaelic Grammar Wiki*. Retrieved from https://gaelicgrammar.org/~gaelic/mediawiki/index.php/Scottish_Gaelic_Grammar_Wiki
- Carnie, A., & Harley, H. (2005). Existential Impersonals. *Studia Linguistica* 59(1), 46-65. <https://doi.org/10.1111/j.1467-9582.2005.00119.x>
- Chadwick, N. (1997). *The Celts*. Penguin.
- Chafe, W., & Danielewicz, J. (1987). Properties of spoken and written language. In R. Horowitz & S. J. Samuels (Eds.). *Comprehending oral and written language* (pp. 83-113). Academic Press, Inc.
- Chambers, R. (1837). *History of the English Language and Literature*. Edward Hopkins.

- Chapman, D. (2008). The eighteenth-century grammarians as language experts. In I. Tieken-Boon van Ostade (Ed.). *Grammars, grammarians and grammar-writing in eighteenth-century England* (pp. 21-36). Mouton de Gruyter.
- Chisholm, H. (1911). Birch, Thomas. *Encyclopædia Britannica*. 3 (11th ed.). Cambridge University Press.
- Chomsky, N. (1965). *Aspects of the Theory of Syntax*. The MIT Press.
- Clerke, A. M. (1885). Robert Adrain. *Dictionary of National Biography*. Vol. 1. Smith, Elder & Co.
- Cobbett, W. (1835). *A Grammar of the English Language*. Mills and Co.
- Coleman, S. (2003). The centralised government of liquidity: community, language and culture under the Celtic Tiger. In C. Coulter & S. Coleman (Eds.) *The end of Irish history? Critical reflections on the Celtic Tiger* (pp. 175-191). Manchester University Press.
- Collins, P. C. (1996). Get-passives in English. *World Englishes*, 15(1), pp. 43-56. <https://doi.org/10.1111/j.1467-971X.1996.tb00091.x>
- Coolidge, J. L. (1926). Robert Adrain and the Beginnings of American Mathematics. *American Mathematical Monthly*, 33, 61-76. <https://doi.org/10.2307/2300067> / <https://doi.org/10.1080/00029890.1926.11986532>
- Coote, C. (1788). *Elements of the Grammar of the English Language*. Charles Coote.
- Corbett, J. (1997). *Language and Scottish Literature*. Edinburgh University Press.
- Corrigan, K. P. (2010). *(Dialects of English) Irish English. Volume 1. Northern Ireland*. Edinburgh University Press.
- Courtney, W. P. (1886). Birch, Thomas (1705-1766). In L. Stephen *Dictionary of National Biography*, 5. Smith, Elder & Co.
- Cousin, J. W. (1910). *A Short Biographical Dictionary of English Literature*. J. M. Dent & Sons.
- Cox, M. F. (1913), George Petrie. *The Irish Monthly, Irish Jesuit Province*, 41(479): 233–248.
- Coyne, G. L. (2012). Lead to Gold, Sorcery to Science: Alchemy and the Foundations of Modern Chemistry. *PIT Journal*.
- Crespo, B. (2004). English and Galician in the Middle Ages: A Sociohistorical Survey. *Revista Alicantina de Estudios Ingleses*, 17. Universidad de Alicante, 45-63. <https://doi.org/10.14198/raei.2004.17.04>

- Crespo, B. (2012a) Astronomy as scientific knowledge in Modern England. In I. Moskowich & B. Crespo (Eds.). *Astronomy 'playne and simple': The Writing of Science between 1700 and 1900*. (pp. 15-34) John Benjamins.
- Crespo, B. (2012b). Communicating Astronomy in the 19th Century Verbs of Saying in CETA. In N. Vázquez (Ed.). *Creation and Use of Historical English Corpora in Spain*. (205-223). Cambridge Scholars.
- Crespo, B. (2013). *Change in Life, Change in Language: A Semantic Approach to the History of English*. Peter Lang.
- Crespo, B., & Moskowich, I. (2009). CETA in the Context of the Coruña Corpus. *Literary and Linguistic Computing*, 25(2), 153-164. <https://doi.org/10.1093/lc/fqp038>
- Crespo, B. & Moskowich, I. (2020). Astronomy, Philosophy, Life Sciences and History Texts: Setting the Scene for the Study of Modern Scientific Writing. *English Studies*, 101(6), 665-684. <https://doi.org/10.1080/0013838X.2020.1798635>
- Curme, G. O. (1947). *English Grammar*. Barnes & Noble.
- Davison, A. (1980). Peculiar Passives. *Language*, 56(1). 42-66. <https://doi.org/10.2307/412642>
- de Beaugrande, R. (1993). 'Register' in discourse studies: a concept in search of a theory in M. Ghadessy (Ed.). *Register Analysis. Theory and Practice*. (pp. 7-25). Pinter Publishers.
- de Fréine, S. (1977). The dominance of the English language in the nineteenth century. In D. Ó Muirithe (Ed.). *The English language in Ireland* (pp. 71-87). The Mercier Press.
- de Paor, L. (1985). *Portrait of Ireland*. Rainbow.
- Denison, D. (1993). *English Historical Syntax*. Longman Linguistic Library.
- Desmond, A. F. (2000). Francis Ysidro Edgeworth, 1845-1926. In K. Houston (Ed.). *Creators of Mathematics: The Irish Connection*. (pp. 79-87). Dublin College University Press.
- Dillon, M. (1967), George Petrie (1789-1866). *Studies: An Irish Quarterly Review, Irish Province of the Society of Jesus*, 56(223), 266-276.
- Dolan, T. (2003). Translating Irelands: the English language in the Irish context. In M. Cronin & C. Ó Cuilleaináin (Eds.). *The languages of Ireland* (pp. 78-92). Four Courts Press.

- Downing, A. (1996). The Semantics of Get-Passives. In H. Ruqaiya, C. Cloran & D. G. Butt. (Eds.). *Functional Descriptions. Theory in Practice*. (pp. 179-205). John Benjamins. <https://doi.org/10.1075/cilt.121.07dow>
- Downing, L. (2013). George Berkeley. *The Stanford Encyclopedia of Philosophy*, E. N. Zalta (Ed.), Retrieved from <https://plato.stanford.edu/archives/spr2013/entries/berkeley/>
- Doyle, A. (2001). *Irish*. Lincom Europa.
- Doyle, A. (2015). A history of the Irish language: from the Norman invasion to independence. Oxford University Press. Retrieved from [es.scribd.com/doc/293802718/Aidan-Doyle-A-History-of-the-Irish-Language](https://www.scribd.com/doc/293802718/Aidan-Doyle-A-History-of-the-Irish-Language)
- Drid, T. (2010). Discourse analysis: key concepts and perspectives. *al-Athar*, 9, 20-25.
- Duffy, S. (1997). Origins. In S. Duffy (Ed.). *Atlas of Irish History*. (pp. 10-31). Gill & Macmillan.
- Edwards, J. (2016). Minority languages and group identity. Scottish Gaelic in the Old World and the New. In S. Preece (Ed.). *The Routledge Handbook of Language and Identity*. (pp. 492-503). Routledge.
- El-Marzouk, G. (2004). *Impersonal Passivization and its 'Personalization': A Pragmatic Approach*. (CLCS Occasional Paper No. 63). Trinity College Dublin.
- El-Marzouk, G. (2013). "Impersonal Passive 'Personalized'". *International Journal of Arabic-English Studies (IJAES)*, 14, 43-70.
- Embick, D. (2004). On the Structure of Resultative Participles in English. *Linguistic Inquiry*, 35 (3), 355-392. <https://doi.org/10.1162/0024389041402634>
- Encyclopædia Britannica Online: Peter Barlow. Retrieved from Déantar an cháis se oar fheirm > This cheese is made on a farm (Ó Sé & Sheils, 2001: 149).
- Encyclopædia Britannica Online (1911): Samuel Rawson Gardiner. Retrieved from Déantar an cháis se oar fheirm > This cheese is made on a farm (Ó Sé & Sheils, 2001: 149).
- Evans, D. (2015). The Identities of language. In D. Evans (Ed.). *Language and identity. Discourse in the World*. Bloomsbury, 15-35.
- Fara, Patricia. (2004). *Pandora's Breeches. Women, science & power in the Enlightenment*. Pimlico.
- Fennell, B.A. (2001). *A History of English: A Sociolinguistic Approach*. Blackwell.
- Fenning, D. (1771). *A New Grammar of the English Language*. S. Crowder.

- Ferguson, C. A. (1994). Dialect, Register, and Genre: Working Assumptions About Conventionalization. In D. Biber & E. Finegan (Eds.). *Sociolinguistic Perspectives on Register*. (15-30). Oxford University Press.
- Filppula, M. (1986). *Some aspects of Hiberno-English in a functional sentence perspective*. University of Joensuu.
- Filppula, M. (1990). Substratum, Superstratum, and Universals in the Genesis of Hiberno-English. *Irish University Review. The English of the Irish: Special Issue*. 20(1), 41-54.
- Filppula, M. (1991). Urban and rural varieties of Hiberno-English. In J. Cheshire (Ed.). *English Around the World*. (pp. 51-60) Cambridge University Press. <https://doi.org/10.1017/CBO9780511611889.004>
- Fischer, O. (1991). The rise of the passive infinitive in English. In D. Kastovsky (Ed.) *Historical English Syntax*. (pp. 141-188). Mouton de Gruyter. <https://doi.org/10.1515/9783110863314.141>
- Fischer, O., & van der Wurff, W. (2006). Syntax. In R. Hogg & D. Denison (Eds.). *A History of the English Language*. (pp. 109-198) Cambridge University Press.
- Fitzpatrick, S. (2006). Science, 1550-1800. In R. Gillespie & A. Hadfield (Eds.). *The Oxford history of the Irish book. Vol. III. The Irish book in English 1500-1800* (pp. 335-346). Oxford University Press.
- Flanagan, M. T. (1989). The Vikings. In P. Loughrey (Ed.). *The people of Ireland*. (pp. 55-65). Appletree Press.
- Frajzyngier, Z. (1978). An Analysis of Be-passives. *Lingua* 46, 133-156. [https://doi.org/10.1016/0024-3841\(78\)90058-X](https://doi.org/10.1016/0024-3841(78)90058-X)
- Fraser, C. (2008). Mathematics. *Cambridge Histories Online*. Cambridge University Press, 305-327.
- Freeborn, D. (1998). *From Old English to Standard English. A course book in language variation across time*. University of Ottawa Press.
- Freidin, R. (1975). The analysis of passives. *Language*, 51(2), 384-405. <https://doi.org/10.2307/412862>
- Gansterer, J. (2016) *The influence of the Irish language on Irish English. An analysis of lexical items and language contact*. B.A. Essay. University of Iceland.
- Garnet, R. (2011) Young, Matthew. *Dictionary of National Biography, 1885-1900*, Volume 63.
- Givón, T. (1993). *English grammar. A function-based introduction II*. John Benjamins.

- Givón, T., & Yang, L. (1994). The rise of the English GET-passive. In B. Fox & P. Hopper (Eds.). *Voice: Form and Function*. (pp.119-149) John Benjamins.
<https://doi.org/10.1075/tsl.27.07giv>
- Glaisher, J. W. L. (1884). Obituary of Henry John Stephen Smith, *Monthly Notices of the Royal Astronomical Society*, XLIV, 138–149.
<https://doi.org/10.1093/mnras/44.4.138>
- González Álvarez, M. D., & Pérez Guerra, J. (2001). Sintaxis del inglés moderno. In I. de la Cruz Cabanillas & F. J. Martín Arista (Eds.). *Lingüística histórica inglesa*. (pp. 655-698). Ariel.
- Görlach, M. (2004). *Text Types and the History of English*. Mouton de Gruyter.
- Gow, R. (1997). George Salmon: His Mathematical Work and Influence. *IMS Bulletin*, 39, 26-76.
- Gow, R. (2000a). George Salmon, 1819-1904. In K. Houston (Ed.). *Creators of Mathematics: The Irish Connection*. (pp. 39-45). Dublin College University Press.
- Gow, R. (2000b). Henry John Stephen Smith, 1826-83. In K. Houston (Ed.). *Creators of Mathematics: The Irish Connection*. (pp. 63-69). Dublin College University Press.
- Gow, R. (2008). George Salmon. *Dictionary of Irish Biography*. Royal Irish Academy.
 Retrieved from <https://web.archive.org/web/20081115231828/http://www.ria.ie/projects/dib/salmon.html>
- Gramley, S. (2012). *The history of English. An introduction*. Routledge.
- Graves, R. P. (1882). *Life of Sir William Rowan Hamilton*, Volume I. Hodges, Figgis, & Co.
- Graves, R. P. (1885). *Life of Sir William Rowan Hamilton*, Volume II. Hodges, Figgis, & Co.
- Graves, R. P. (1889). *Life of Sir William Rowan Hamilton*, Volume III. Hodges, Figgis, & Co.
- Gray, G. J. (2001). Donn, Benjamin. *Dictionary of National Biography, 1885-1900*, Déantar an cháis se oar fheirm > This cheese is made on a farm (Ó Sé & Sheils, 2001: 149).
- Greene, D. (2020) Celtic Languages. *Encyclopaedia Britannica* 3, 1064-1068.
 Retrieved from www.britannica.com/topic/Celtic-languages

- Greenwood, J. (1737). *The Royal English Grammar*. J. Nourse.
- Greenwood, J. (1753). *An Essay Towards a Practical English Grammar*. J. Nourse.
- Gutiérrez Rodilla, B. M. (1998). *La ciencia empieza en la palabra. Análisis e historia del lenguaje científico*. Península.
- Gutiérrez Rodilla, B. M. (2003). Los diccionarios, instrumentos importantes en la reconstrucción del lenguaje científico. In B. M. Gutiérrez Rodilla (Ed.) *Aproximaciones al lenguaje de la ciencia*. (pp. 453-463). Colección Beltenebros.
- Halliday, M. A. K. (2002). *Linguistic Studies of Text and Discourse*. Continuum.
- Halliday, M. A.K. 2004. *The Language of Science*. Continuum.
- Hankins, T. L. (1980). *Sir William Rowan Hamilton*. The Johns Hopkins University Press.
- Harris, J. (1991). Ireland. In J. Cheshire. (Ed.). *English Around the World*. (pp. 37-50). Cambridge University Press.
- Harvey, J., & Ogilvie, M. (2000). *The Biographical Dictionary of Women in Science: Pioneering Lives from Ancient Times to the Mid-Twentieth Century*. Routledge.
- Hasewaga, K. (1968). The passive construction in English. *Language*, 44(2), 230-243. <https://doi.org/10.2307/411620>
- Henry, J. (2004). Science and the coming of Enlightenment. In M. Fitzpatrick, P. Jones, C. Knellwolf & I. McCalman (Eds.). *The Enlightenment World*. (pp. 10-26). Routledge.
- Henry, P.L. (1985) Linguistic Atlases and Vocabulary: The Linguistic Survey of Anglo-Irish. In M. Kirk, S. Sanderson & J. D. Widdowson (Ed.). *Studies in Linguistic Geography. The Dialects of English in Britain and Ireland*. (pp. 157-171). Croom Helm.
- Hernández-Guerra, C. (2014). An overview of the approaches and methods for analysing a text from a discursive viewpoint. *Onomázein* 30, 237-247.
- Herris Davies, G. L. (2004). Before a blood-stained tapestry. Irish political violence and Irish science. In D. Attis (Ed.). *Science & Irish culture* (pp. 33-50). The Royal Dublin Society.
- Hickey, R. (2002). *A source book for Irish English*. John Benjamins.
- Hickey, R. (2004). *A sound atlas of Irish English*. Mouton de Gruyter.
- Hickey, R. (2009). Modal verbs in English and Irish. In E. Penttilä & H. Paulasto (Eds). *Language Contacts Meet English Dialects: Studies in Honour of Markku Filppula*. Cambridge Scholars Publishing.

- Hickey, R. (2010). English in eighteenth-century Ireland. In R. Hickey (Ed.). *Eighteenth-century English. Ideology and change* (pp. 235-268). Cambridge University Press.
- Hickey, R. (2013). Standard English and standards of English. In R. Hickey (Ed.). *Standards of English. Codified varieties around the world* (pp. 1-33). Cambridge University Press. <https://doi.org/10.1017/CBO9781139023832.002>
- Hodges, B. D., Kuper, A., & Reeves, S. (2008). Discourse analysis. *BMJ*, 337(a879), 570-576. <https://doi.org/10.1136/bmj.a879>
- Hodgkin, T. (1906). *The History of England. From the Earliest Times to the Norman Conquest*. Longmans, Green, and Co.
- Huddleston, R. (1984). Introduction to the grammar of English. Cambridge University Press.
- Hundt, M. 2004. The passival and the progressive passive. A case study of layering in the English aspect and voice system. In H. Lindquist & C. Mair (Eds.). *Corpus Approaches to Grammaticalization in English*. (pp. 79-120). John Benjamins.
- Iglesias Rábade, L. (1992). *El uso del inglés y francés en la Inglaterra normanda y plantagenet (1066-1399)*. Servicio de Publicaciones e Intercambio Científico. Universidade de Santiago de Compostela.
- Jespersen, O. (1933). *Essentials of English Grammar*. Allen and Unwin.
- Kaplan, R. B. (2001). English – the Accidental Language of Science? In U. Ammon, (Ed.). *The Dominance of English as a Language of Science. Effects on Other Languages and Language Communities*. (pp. 3-26). Mouton de Gruyter. <https://doi.org/10.1515/9783110869484.3>
- Kassler, J. Kroy. (1979). *The Science of Music in Britain: A Catalogue of writings, Lectures and Inventions*, 2 vol. Garland.
- Katz, J. J., & Postal, P. M. (1964). *An Integrated Theory of Linguistic Descriptions*. The MIT Press.
- Keating, E.F. (1990). [Quintela, A. (Trad)], *Afinidades Culturais entre Galicia e Irlanda*. Galaxia.
- Keenan, E. L. (1985). Passive in the world's languages. In T. Shopen (Ed.). *Language typology and syntactic description. Volume 1. Clause structure*. (pp. 243-281). Cambridge University Press.
- Kelly, J. (1997). From Splendour to Famine. In S. Duffy (Ed.). *Atlas of Irish History*. (pp. 70-95) Gill & Macmillan.

- Knight, D. (1986). *The Age of Science. The Scientific World-view in the Nineteenth Century*. Basil Blackwell.
- Knowles, G. (1997). *A cultural history of the English language*. Arnold.
- Kulikov, L., & Lavidas, N. (2014). Introduction: Typology of labile verbs. *Linguistics* 52(4). 871-877. <https://doi.org/10.1515/ling-2014-0010>
- Kytö, M., Rudanko, J., & Smitterberg, E. (2000). Building a bridge between the present and the past: A corpus of 19th century English. *ICAME Journal*, 24, 85-97.
- Lakoff, R. (1971). Passive Resistance. *Papers from the Seventh Regional Meeting. Chicago Linguistic Society*. (pp.149-162). The University of Chicago Press.
- Langacker, R. W., & Munro, P. (1975). Passives and Their Meaning. *Language*, 51(4), 789-830.
- Lawson, R. (2014). Introduction: An Overview of Language in Scotland. In R. Lawson (Ed.) *Sociolinguistics in Scotland*. (pp. 1-14) Palgrave Macmillan. <https://doi.org/10.1057/9781137034>
- Leaney, E. Young, Matthew. *Dictionary of Irish Biography*. Retrieved from <https://dib.cambridge.org/viewReadPage.do?article=a9175&searchClicked=clicked&quickadvsearch=yes>
- Lee, D. Y. W. (2001). Genres, Registers, Text Types, and Styles: Clarifying the Concepts and Navigating a Path through the BNC Jungle. *Language Learning & Technology*, 5(3), 37-72. https://doi.org/10.1163/9789004334236_021
- Lee, S. (1885). Adams, John (1750?–1814), compiler of books for young readers. *Dictionary of National Biography 1885-1900*. Smith, Elder & Co.
- Lee, S. (1897). Robinson, Martha Walker. *Dictionary of National Biography*. 49. Smith, Elder & Co.
- Lees, R. (1960). *The grammar of English nominalizations*. Indiana University.
- Lehiste, I. (1988). *Lectures on Language Contact*. Massachusetts Institute of Technology.
- Leith, D. (1992). *A Social History of English*. Routledge.
- Litton Falkiner, C. Stock, Joseph. *Dictionary of National Biography.1885-1900*. Smith, Elder & Co.
- Longman (1992) *Dictionary of English Language and Culture*.
- López Orellana, M. A. (2012). Popularising scientific discourse. *Quaderns de Filologia. Estudis lingüístics*, 17, 83-96.

- Los, B. (2002). The loss of the Indefinite Pronoun *man*: Syntactic Change and Information Structure. In T. Fanego, J. Pérez-Guerra & M. J. López-Couso (Eds.) *English Historical Syntax and morphology: Selected Papers from 11 ICEHL, Santiago de Compostela*. (pp. 181-202). John Benjamins. <https://doi.org/10.1075/cilt.223.12los>
- Lutz, A. (2017). Norse Loans in Middle English and their Influence on Late Medieval London English. *Anglia*, 135(2), 317-357. <https://doi.org/10.1515/ang-2017-0028>
- MacAuley, D. (1992). The Celtic Languages: an overview. In D. MacAulay (Ed.). *The Celtic Languages*. (pp. 1-8). Cambridge University Press. <https://doi.org/10.1017/CBO9780511551871.002>
- Macleod, M. (2010). Language in Society: 1800 to the Modern Day. In M. Watson & M. Macleod (Eds.) *The Edinburgh Companion to Gaelic* (pp. 22-45). Edinburgh University Press.
- Malášková, Z. (2011). *Low German Loan Words in English*. Master's Non-Diploma Thesis. Masaryk University.
- Matsumoto, M. (1999). Composite Predicates in Middle English. In L. Brinton & M. Akimoto (Eds.). *In Collocational and Idiomatic Aspects of Composite Predicates in the History of English*. (pp. 59-95). John Benjamins.
- Matthiessen, C. (1993). Register in the round: diversity in a unified theory of register analysis. In M. Ghadessy (Ed.). *Register Analysis. Theory and Practice*. (pp. 221-283). Pinter Publishers.
- Maume, P. (2004) Standish James O'Grady: Between Imperial Romance and Irish Revival. *Éire-Ireland*, 39(1&2), 11-35. <https://doi.org/10.1353/eir.2004.0005>
- McDowell, R. B. (1957). Dublin and Belfast – a comparison. In R. B. McDowell (Ed.). *Social life in Ireland 1800-45* (pp. 11-24). Mercier Press.
- Mellizo, C. (2013). George Berkeley. *Obra completa*. Biblioteca de Grandes Pensadores. Editorial Gredos.
- Millward, C. M. (1996). *A biography of the English language*. Harcourt Brace.
- Millward, C. M. (2012). *A biography of the English language*. Wardsworth/Cengage Learning.
- Moessner, L. (1994). Early Modern English passive constructions. In D. Kastovsky (Ed.). *Studies in Early Modern English*. (pp. 217-231). Mouton de Gruyter. <https://doi.org/10.1515/9783110879599.217>

- Molloy, J. H. *A grammar of the Irish language*. McGlashan & Gill.
- Moore, N. (1890). Hardiman, James. In L. Stephen & S. Lee (Eds.). *Dictionary of National Biography*, 24. Smith, Elder & Co.
- Moore, N. (1893). Leland, Thomas. *Dictionary of National Biography 1885-1900*. Smith, Elder & Co.
- Morley, H., & Edmunds, E. W. (1912). *A First Sketch of English Literature*. Cassell and Company, Limited.
- Morrin, O. (2017). The Nun of Kenmare: Margaret Anna Cusack (1829-1899). *Special Collections & Archives*. Retrieved from <https://mulibrarytreasures.wordpress.com/2017/01/23/the-nun-of-kenmare-margaret-anna-cusack-1829-1899/>
- Moskowich, I. (2004). Scandinavians and Anglo-Saxons: Lexical Substitution and Lexical Change in English. *Fòrum de recerca*, 10. <http://hdl.handle.net/2183/16703>
- Moskowich, I. (2016). Lexical richness in modern women writers: Evidence from the Corpus of History English Texts. *Revista Canaria de Estudios Ingleses (RCEI)*, Monographic Issue: Women scientists, women travellers, women translators: Their language and their history, 72, 111-128.
- Moskowich, I. (2020). Personal Pronouns in CHET and CEChET: Authorial Presence and other Nuances Revealed. *Studies about Languages*, 37, 56-73.
- Moskowich, I., Lareo, I., Lojo Sandino, P., & Sánchez-Barreiro, E. (Comps.) (2019). *Corpus of History English Texts*. A Coruña: Universidade da Coruña. <https://doi.org/10.17979/spudc.9788497497091>
- Murphy, C. (2008) Cusack, Margaret Anna. In J. P. Byrne, P. Coleman & J. F. King (Eds.). *Ireland and the Americas* Vol. 2 (pp. 225-227)
- Murphy, J. H. (2003). *Ireland: a social, cultural and literary history, 1791-1891*. Four Courts Press.
- Nesbitt, S. (2005) *George Salmon: from Mathematics to Theology*. Retrieved from http://turnbull.mcs.st-and.ac.uk/history/Miscellaneous/other_links/Salmon_theology.html
- Ní Mhunghaile, L. (2015a). The Irish Language in County Meath, 1700-1900. In F. Ludlow & A. Crampsie (Eds.). *Meath, History and Society. Interdisciplinary essays on the History of and Irish County*. (pp. 547-572). Geography Publications.

- Ní Mhungaile, L. (2015b). ‘The last of the great Irish antiquarians of the past’: Standish O’Grady, 1832-1915. “1815, 1915: Centenaries and bicentenaries: Celticists, lexicographers and antiquarian scholars”. [Invited Lecture], Royal Irish Academy Public Lecture. RIA, Dublin.
- Ní Ríordáin, M. (2013). A comparison of Irish and English language features and the potential impact on mathematical processing. In B. Ubuz, C. Haser & M. Mariotti (Eds.) *8th Congress of the European Society for Research in Mathematics Education*. Antalya, Turkey, pp. 1576-1585.
- Nolan, B. (2006). The passives of Modern Irish. In A. Wemer & L. Leisiö (Eds.). *Passivization and Typology. Form and function. Typological studies in Language* 68. (pp. 132-164). John Benjamins
<https://doi.org/10.1075/tsl.68.10nol>
- Nolan, B. (2007). The role of definiteness in the impersonal passives of Modern Irish: Towards an RRG characterisation. *Language and Linguistics* 1(1): 143-166.
- Noonan, M. (1994). A Tale of Two Passives in Irish. In B. Fox & P. Hopper (Eds.). *Voice: Form and Function*. (pp. 279-311). John Benjamins.
<https://doi.org/10.1075/tsl.27.12noo>
- Nunberg, G., Sag, I. A., & Wasow, T. (1994). Idioms. *Language* 70, 491-538.
<https://doi.org/10.2307/416483> / <https://doi.org/10.1353/lan.1994.0007>
- Ó Baoill, C. (2010). A history of Gaelic to 1800. In M. Watson & M. Macleod (Eds.) *The Edinburgh Companion to Gaelic* (pp. 1-21). Edinburgh University Press.
- Ó Baoill, D. P. (1997). The emerging Irish phonological substratum in Irish English. In J. Kallen (Ed.). *Focus on Ireland* (pp. 73-87). John Benjamins.
- Ó Corrain, A. (2006). On the ‘After Perfect’ in Irish and Hiberno-English. *The Celtic Englishes* 4, 152-172.
- Ó Dochartaigh, C. (1992). The Irish language. In D. MacAulay (Ed.). *The Celtic Languages*. (pp. 11-99). Cambridge University Press.
<https://doi.org/10.1017/CBO9780511551871.003>
- Ó Dochartaigh, C. (2000). Irish in Ireland. In G. Price (Ed.). *Languages in Britain & Ireland*. (pp. 6-36). Blackwell.
- Ó Fiaich, T. (1989). The Celts. In P. Loughrey (Ed.). *The People of Ireland*. (pp. 26-39). Appletree Press.
- Ó hEithir, B. (1987). *This is Ireland*. O’Brien Press.
- Ó Sé, D., & Sheils, J. (2001). *Teach yourself Irish*. Hodder & Stoughton.

- Ó Siadhail, M. (1989). *Modern Irish. Grammatical structure and dialectal variation*. Cambridge University Press.
- Ó Tuathaigh, G. (1989). The Celts II. In P. Loughrey (Ed.). *The people of Ireland*. (pp. 40-54). Appletree Press.
- O'Byrne, W. R. (1849). *A Naval Biographical Dictionary*. John Murray.
- O'Connor, J. J., & Robertson, E. F.. *Francis Ysidro Edgeworth*. Mactutor History of Mathematics Archive. University of St Andrews. Retrieved from <http://www-history.mcs.st-andrews.ac.uk/Biographies/Edgeworth.html>
- O'Connor, J. J., & Robertson, E. F. *George Green*. Mactutor History of Mathematics Archive. University of St Andrews. Retrieved from <http://www-history.mcs.st-andrews.ac.uk/Biographies/Green.html>
- O'Connor, J. J., & Robertson, E. F. *George Salmon*. Mactutor History of Mathematics Archive. University of St Andrews. Retrieved from <http://www-history.mcs.st-andrews.ac.uk/Biographies/Salmon.html>
- O'Connor, J. J., & Robertson, E. F. *Henry John Stephen Smith*. Mactutor History of Mathematics Archive. University of St Andrews. Retrieved from <http://www-history.mcs.st-andrews.ac.uk/Biographies/Smith.html>
- O'Connor, J. J., & Robertson, E. F. *Peter Barlow*. Mactutor History of Mathematics Archive. University of St Andrews. Retrieved from <http://www-groups.dcs.st-and.ac.uk/~history/Biographies/Barlow.html>
- O'Connor, J. J., & Robertson, E. F. *Alfred George Greenhill*. Mactutor History of Mathematics Archive. University of St Andrews. Retrieved from <http://www-history.mcs.st-andrews.ac.uk/Biographies/Greenhill.html>
- O'Donnell, J., & de Fréine, S. (1994). *Ireland – The Great Little Answer Book*. Torc.
- O'Faolain, S. (1980). *The Irish*. Penguin.
- Osawa, F. (2010). Syntactic passive: its rise and growth in the history of English. In M. Kytö, J. Scahill & H. Tanabe (Eds.). *Language change and variation from Old English to Late Modern English* (pp. 117-138). Peter Lang.
- Owens, M. (1992). *The Acquisition of Irish: a Case Study*. Multilingual Matters.
- Oxford Advanced Learner's Dictionary. <https://www.oxfordlearnersdictionaries.com/>
- Pahta, P., & Taavitsainen, I. 2009. Scientific discourse. *Historical Pragmatics*, 549-586. <https://doi.org/10.1515/9783110214284.7.549>
- Palmer, F. R. (1974). *The English Verb*. Longman.
- Palmer, F. R. (1988). *The English Verb*. (2nd ed.) Longman.

- Palmer, P. (2001). *Language and Conquest in Early Modern Ireland*. Cambridge University Press.
- Parker, F. (1976). Language Change and the passive voice. *Language*, 52(2), 449-460. <https://doi.org/10.2307/412570>
- Pearson, E. S. (1990) *'Student', A Statistical Biography of William Sealy Gosset*, Oxford University Press.
- Poutsma, H. (1926). *A Grammar of Late Modern English*. Vol. 2. Part 3. Front Cover. P.
- Purdon, E. (1999). *The Story of the Irish Language*. Mercier Press.
- Pyles, T., & Algeo, J. (1993). *The Origins and Development of the English Language*. Harcourt Brace.
- Quirk, R., Greenbaum, S., Leech, G., & Svartvik, J. (1985). *A comprehensive grammar of the English language*. Longman.
- Ravenstein, E.G. (1879) On the Celtic Languages of the British Isles: A Statistical Survey. *Journal of the Statistical Society of London*, 42(3), 583.
- Reed, S. (2008). Passives. *Scottish Gaelic Grammar Wiki*. Retrieved from <https://gaelicgrammar.org/~gaelic/mediawiki/index.php/Passives>
- Reguant, S. (2003). Perspectivas sobre la terminología, el discurso y la cultura científicos. In B. M. Gutiérrez Rodilla (Ed.). *Aproximaciones al lenguaje de la ciencia*. (pp. 69-110). Colección Beltenebros.
- Renfrew, C. (1990). *Archaeology & Language. The puzzle of Indo-European origins*. Cambridge University Press.
- Richards, C. (1996). Monuments as landscape: Creating the centre of the world in the late Neolithic Orkney. *World Archaeology*, 28(2), 190-208. <https://doi.org/10.1080/00438243.1996.9980340>
- Richards, C. (2013). *Building the Great Stone Circles of the North*. Windgather Press.
- Right, L. (2000). Introduction. In L. Right (Ed.). *The development of Standard English 1300-1800. Theories, descriptions, conflicts* (pp. 1-8). Cambridge University Press.
- Rodman, L. (1981). The Passive in Technical and Scientific Writing. Paper presented at the 32nd Annual Meeting of the Conference on College Composition and Communication. Dallas, Texas.
- Sainero, R. (2003). [Peña Guerrero, R.M. (Trad)], *Linguas e Literaturas Celtas. Orixe e Evolución*. Toxosoutos.

- Sandys, J. E. (1912). Taylor, Charles (1840-1908). *Dictionary of National Biography*.
- Scheffer, J. (1975). *The progressive in English*. North-Holland.
- Schrader, D. V. (2013). The Newton-Leibniz Controversy concerning the Discovery of the Calculus. In F. J. Swetz (Ed.) *The European Mathematical Awakening. A Journey Through the History of Mathematics from 1000 to 1800*. (pp. 175-186). Dover Publications Inc.
- Sedgwick, W. T., & Tyler, H. W. (1917). *A short history of science*. The Macmillan Company.
- Seoane Posse, E. (2006). Information Structure and Word Order Change: The Passive as an Information-rearranging Strategy in the History of English. In A. van Kemenades & B. Los (Eds.). *The Handbook of the History of English*. (pp. 360-391). Blackwell. <https://doi.org/10.1002/9780470757048.ch15>
- Seoane, E., & Hundt, M. (2018). Voice Alternation and Authorial Presence: Variation across Disciplinary Areas in Academic English. *Journal of English Linguistics*, 46(1), 3-22. <https://doi.org/10.1177/0075424217740938>
- Siewierska, A. (1984). *The Passive: A Comparative Linguistic Analysis*. Antony Rowe Ltd.
- Siewierska, A. (1998). Passive-to-ergative versus inverse-to-ergative. In A. Siewierska & J. J. Song (Eds.). *Case, Typology and Grammar. (Typological Studies in Language 38)*. (pp. 229-246). John Benjamins.
- Singer, C. (1941). *A short history of science to the nineteenth century*. Clarendon Press.
- Skaffari, J. (2009). *Studies in Early Middle English loanwords: Norse and French influences. Anglikana Turkuensi, 26*. University of Turku.
- Smith, B. (1997). The Conquest of Ireland. In S. Duffy (Ed.). *Atlas of Irish History*. (pp. 32-49). Gill & Macmillan.
- Spearman, T. D. (2000). William Rowan Hamilton, 1805-65. in K. Houston (Ed.). *Creators of Mathematics: The Irish Connection*. (pp. 11-20). Dublin College University Press.
- Stephen, L. (1885). Banks, John (1709-1751). *Dictionary of National Biography*. 3. (p. 128). Smith, Elder & Co.
- Stein, G. (1979). *Studies in the Function of the Passive*. Gunter Narr Verlag.
- Stigler, S. M. (1978). Francis Ysidro Edgeworth, Statistician. *Journal of the Royal Statistical Society, A*. 141, part. 3, 287-322. <https://doi.org/10.2307/2344804>

- Stigler, S. M. (2004). Adrain, Robert. *Oxford Dictionary of National Biography* (online ed.). Oxford University Press. <https://doi.org/10.1093/ref:odnb/172>
- Stokes, W. (1868), *The Life and Labours in Art and Archaeology, of George Petrie*. Longmans, Green, & Co.
- Strickland, W. G. (1969) *A dictionary of Irish artists'*. Irish University Press.
- Struik, D.J (1970). Robert Adrain. *Dictionary of Scientific Biography*. 1. (pp. 65-66). Charles Scribner's Sons.
- Stubbs, M. (1983). *Discourse Analysis. The Sociolinguistic Analysis of Natural Language*. Blackwell.
- Svartvik, J. (1966). *On Voice in the English Verb*. Mouton.
- Swetz, F. (2016). Mathematical Treasure: Joseph Fenn's Algebra. *Convergence*. Retrieved from www.maa.org/press/periodicals/convergence/mathematical-treasure-joseph-fenn-s-algebra
- Thomason, S. (2001). *Language Contact. An introduction*. Edinburgh University Press.
- Thompson, C. (1994). Passives and inverse constructions. In T. Givón (Ed.) *Voice and inversion*. (pp. 47-64). John Benjamins.
- Tieken-Boon van Ostade, I. M. (2008). Grammars, grammarians and grammar writing: An introduction. In I. Tieken-Boon van Ostade (Ed.). *Grammars, grammarians and grammar writing in the eighteenth-century England*. (pp. 1-14). Mouton de Gruyter. <https://doi.org/10.1515/9783110199185.0.1>
- Tieken-Boon van Ostade, I. M. (2009) *An Introduction to Late Modern English*. Edinburgh University Press
- Toyota, J. (2003). Anglocentric view and its influence on linguistics: a case of the passive voice. *Moenia* 9, 51-73.
- Trosborg, Anna. (1997). Text typology: register, genre and text type. In A. Trosborg (Ed.). *Text typology and translation*. (pp. 3-23). John Benjamins. <https://doi.org/10.1075/btl.26.03tro>
- Trudgill, P. (1992). *Introducing Language and Society*. Penguin.
- Trudgill, P., & Hannah, J. (1994). *International English. A Guide to the Varieties of Standard English*. Edward Arnold.
- Turaeva, M. (2020). The problem of lexical interference of languages in speech. *Mental Enlightenment Scientific-Methodological Journal* 2, 94-100.
- van Hattum, M. (2012). *Irish English Modal Verbs from the fourteenth to the nineteenth centuries*. PhD Thesis. University of Manchester.

- Vilarnovo, A., & Sánchez, J. F. (1994). *Discurso, Tipos de texto y Comunicación*. Eunsa (Ediciones Universidad de Navarra S.A.).
- Visser, F. Th. (1984). *An historical syntax of the English language*. E. J. Brill.
- Webb, A. (1878). Adrian, Robert. *A Compendium of Irish Biography*. M. H. Gill & son.
- Wei, M., & Yu, G. (2019). On the characteristics of scientific discourse and translation. *Theory and Practice in Language Studies*, 9(8), 946-950
<https://10.17507/tpls.0908.08>
- Weiner, J. E., & Labov, W. (1983). Constraints on the agentless passive. *Journal of Linguistics* 19, 29-58.
- Weinreich, U. (1979). *Languages in Contact: Findings and Problems*. Mouton Publishers.
- Wells, J.C. (1982). *Accents of English 2. The British Isles*. Cambridge University Press.
- Wengenroth, U. (2003). Science, Technology, and Industry. In D. Cahan (Ed.). *From Natural Philosophy to the Sciences. Writing the History of Nineteenth-Century Science*. (pp. 221-253) The University of Chicago Press.
- Werner, A., & Leiss, E. (2006a). Personal and impersonal passives: definite vs. indefinite diathesis. *Transactions of the Philological Society*, 104(2), 259-296.
- Werner, A., & Leiss, E. (2006b). The impersonal passive. Voice suspended under aspectual conditions. In A. Werner & L. Leisiö (Eds.) *Passivization and Typology. Form and function. Typological studies in language* 68. (pp. 502-517). John Benjamins. <https://doi.org/10.1075/tsl.68.29abr>
- Wischer, I. (2007). The Treatment of Aspect Distinctions in Eighteenth- and Nineteenth-Century Grammars of English. In M. Dossena & C. Jones (Eds.). *Insights into Late Modern English*. (pp. 151-174). Peter Lang.

APPENDIXES

APPENDIX 1. LIST OF TEXTS IN THE CORPUS

- John Adams

(1795) *A view of universal history, from the creation to the present time: Including an account of the celebrated revolutions in France, Poland, Sweden, Geneva &c, &c. Together with an accurate and impartial narrative of the late military operations*

- Robert Adrain

(1817) *Investigation of the figure of the Earth and of the Gravity in different latitudes*

(1818) *Research concerning the Mean diameter of the Earth*

- Lucy Aikin

(1833) *Memoirs of the Court of King Charles the First. In two volumes. Vol. I*

- John Bancks

(1740) *The history of the life and reign of the Czar Peter the Great Emperor of All Russia And Father of his Country in India*

-Peter Barlow

(1811) *An elementary investigation of the theory of numbers, with its application to the indeterminate and Diophantine analysis, the analytical and geometrical division of the circle, and several other curious algebraical and arithmetical problems*

- George Berkeley

(1734) *The Analyst. A Discourse Addressed to an Infidel Mathematician: Wherein It Is Examined Whether the Object, Principles, and Inferences of the Modern Analysis Are More Distinctly Conceived, or More Evidently Deduced, Than Religious Mysteries and Points of Faith*

-Thomas Birch

(1760) *The life of Henry Prince of Wales, eldest son of King James I*

List of texts in the corpus

- Montagu Burrows

(1895) *The history of the Foreign Policy of Great Britain*

- Mary Frances Cusack

(1875) *A History of the City and County of Cork*

- Benjamin Donne

(1765) *The accountant and geometrician: containing the doctrine of circulating decimals, logarithms, book-keeping and plane geometry. Designed for the Use of Schools, as well as private Gentlemen*

- Francis Ysidro Edgeworth

(1907-8) *Appreciations of Mathematical Theories*

(1910) *Applicatons of probabilities to economics. Part I & Part II*

- Joseph Fenn

(1775) *A new and complete system of algebra; or, Specious arithmetic .Comprehending all the fundamental rules and operations of that science, ... Illustrated For the use of schools.*

- Samuel Rawson Gardiner

(1903) *History of the Commonwealth and Protectorate, 1649-1660*

- William Sealy Gosset (Student)

(1907) *On the Error of Counting with a haemocytometer*

(1908) *The probable Error of a Mean*

(1908) *Probable Error of a Correlation Coefficient*

(1909) *The Distribution of the Means of Samples which are not drawn at random*

- Maria Graham (Lady Maria Callcott)

(1820) *Memoirs of the life of Nicholas Poussin*

- George Green
(1828) *Application of the preceding results to the theory of electricity*

- Alfred George Greenhill
(1886) *Differential and Integral Calculus, with applications*

- Sir William Rowan Hamilton
(1818) *Theory of the system of rays* (1828)

- James Hardiman
(1820) *History of the Town and County of Galway*

- Walter Harris
(1747) *The history of the life and reign of William-Henry, Prince of Nassau and orange, Stadholder of the United Provinces, King of England, Scotland, France and Ireland, &c In which the affairs of Ireland are more particularly handled than in any other History.*

- John Hellins
(1788) *Mathematical Essays*

- Thomas Leland
(1774) *The history of Ireland from the invasion of Henry II. With a preliminary discourse on the ancient state of that kingdom*

- Alexander Malcolm
(1730) *A new system of arithmetick theoretical and practical. Wherein the Science of Numbers is Demonstrated in a Regular Course ...*

- Standish O'Grady
(1878) *History of Ireland*

- Goddard Henry Orpen
(1911) *Ireland under the Normans, 1169-121*

List of texts in the corpus

- George Petrie

(1839) *On the History and Antiquities of Tara Hill*

- George Salmon

(1852) *Treatise on the higher plane curves: Intended as a Sequel to a Treatise on Conic Sections*

- Henry John Stephen Smith

(1878) *Arithmetical notes*

(1878) *On the singularities of the Modular Equations and Curves*

- Joseph Stock

(1800) *A narrative of what passes at Killalla, in the County of Mayo, and the parts adjacent, during the French invasion in the summer of 1798. By an eye Witness.*

- Charles Taylor

(1872) *The geometry of conics*

- Martha Walker Freer

(1860) *History of the reign of Henry IV. King of France and Navarre*

- Rev. Matthew Young

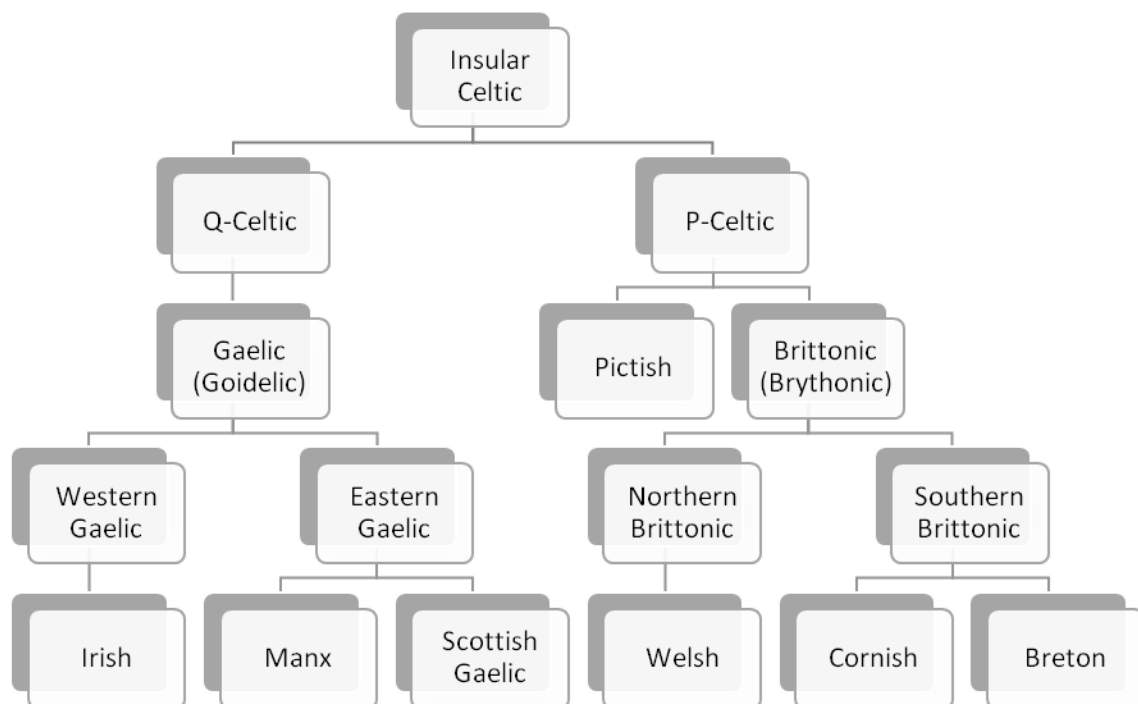
(1786) *A synthetical demonstration of the rule for the quadrature of simple curves, in the Analysis per Equationes terminorum numero infinitas*

(1798) *On the Force of Testimony in establishing facts contrary to Analogy*

APPENDIX 2. MAP WITH THE PLACE OF BIRTH OF THE AUTHORS

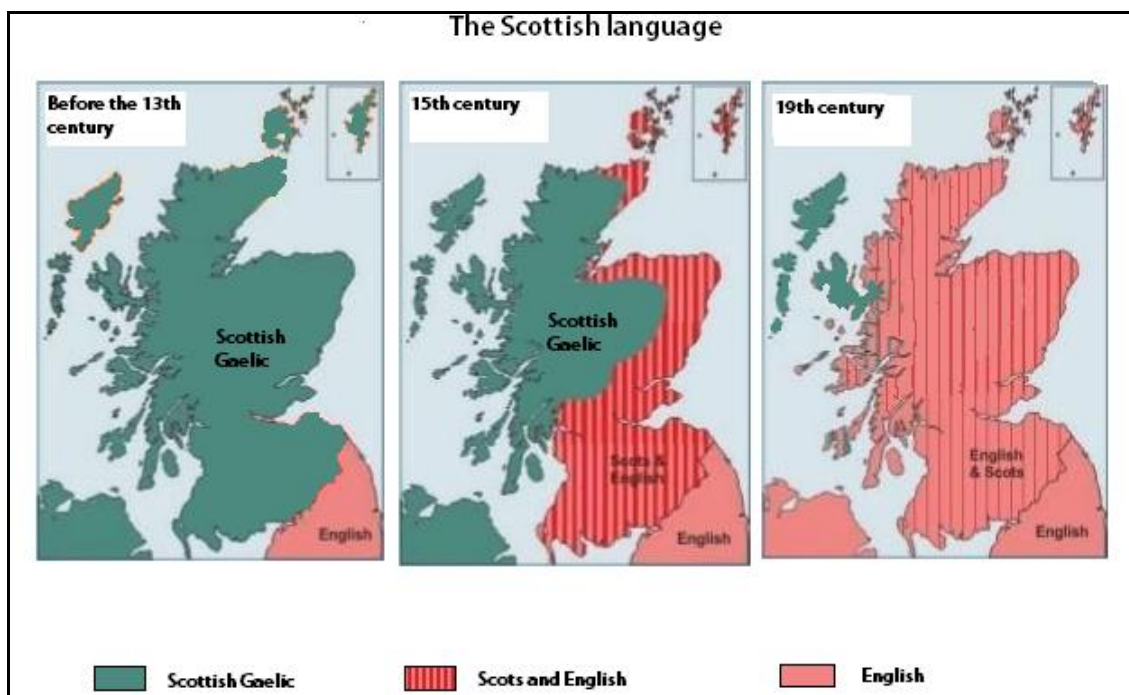
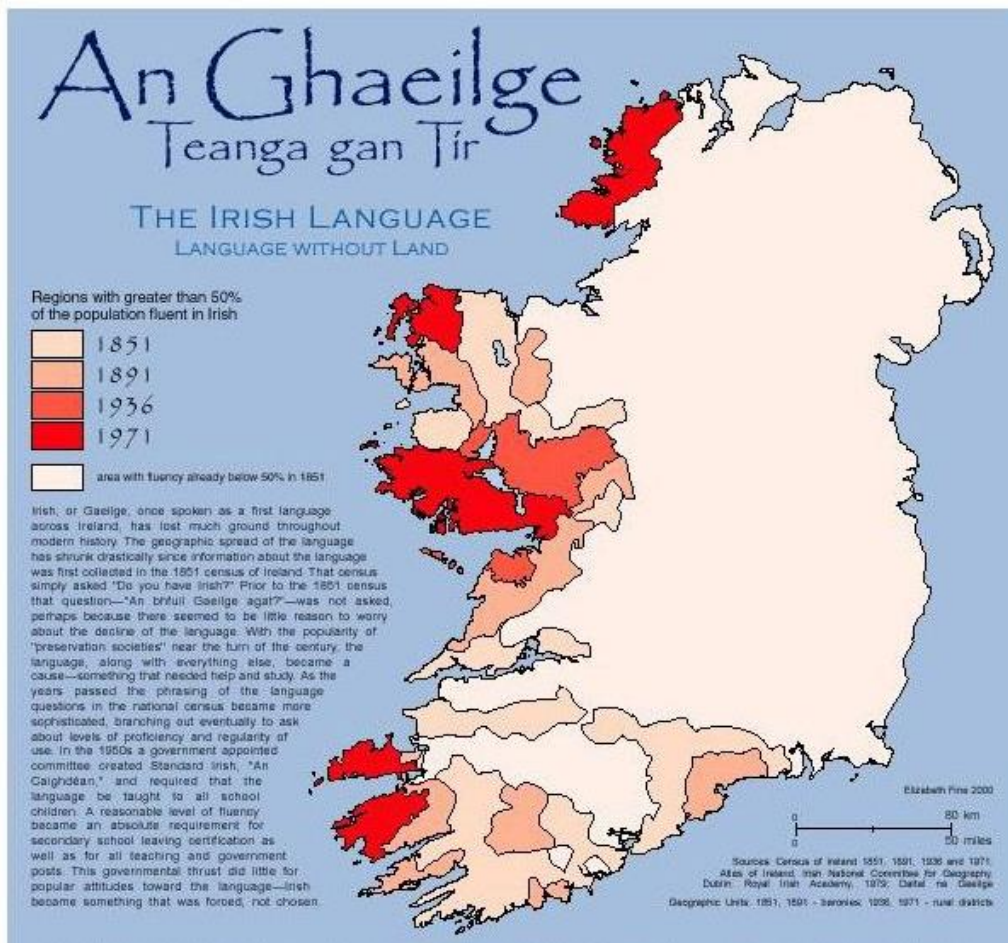


APPENDIX 3. RELATIONSHIP BETWEEN MODERN CELTIC LANGUAGES



According to authors such as Renfrew (1990) and MacAulay (1992)

APPENDIX 4. MAPS OF THE EVOLUTION OF CELTIC LANGUAGES IN IRELAND AND GREAT BRITAIN



APPENDIX 5. RESUMO

O modo no que as persoas aprenden unha nova lingua pode estar influenciada pola súa lingua materna, e tamén polo contacto con falantes nativos da nova lingua. Deste modo, van adoptar como expresións propias o vocabulario e estruturas da nova lingua presente na área.

O obxectivo deste traballo é comprobar se existe algunha interferencia lingüística no inglés usado en Irlanda nos séculos XVIII a XIX dentro do apartado gramatical. O medio utilizado para tal fin é a voz pasiva, e os textos a utilizar englobanse dentro do discurso científico, pertencendo a dúas disciplinas, matemáticas e historia.

Tendo en conta que a lingua a estudar é o inglés utilizado en Irlanda, os textos seleccionados para formar o corpus de análise están escritos tanto por autores irlandeses como británicos. Así, as mostras para o corpus seleccionáronse en intervalos de 25 anos ara cada disciplina e orixe xeográfica, facendo un total de 36 textos.

A organización do traballo está estruturada en 6 capítulos. O primeiro deles fala do contexto histórico de cada un dos territorios, Irlanda e Gran Bretaña (na súa consideración como illas, non como países) e da evolución das linguas e o contacto entre elas. Seguindo a orde, o segundo capítulo trata da periodización do inglés, así como do irlandés, e do discurso científico.

O capítulo 3 céntrase no aspecto gramático desta tese, a voz pasiva. Aquí trátanse aspectos tales como a formación e estrutura, os verbos que se usan, ou as restricións que esta estrutura pode ter. Do mesmo do, este capítulo trata, brevemente, da voz pasiva en irlandés, para poder ver posibles interferencias lingüísticas no momento de analizar os textos.

A tipoloxía de textos, xunto coa descrición dos autores e textos seleccionados, forma o corpo do capítulo 4. Este capítulo vai seguido dos resultados obtidos na análise, tendo en conta as diferentes variables.

Por último, no capítulo 6, están as conclusións ás que se chegaron despois de interpretar os resultados obtidos no capítulo anterior.

Resumo

Para poder conseguir uns resultados fiables, faranse diferentes comparacións de subcorpus, tendo en conta para tal efecto as variables de disciplina e de orixe xeográfica dos autores. Así, unha comparación será entre o subcorpus de historia e o de matemáticas, e outra entre textos escritos por autores británicos e textos de autores irlandeses. Pero tamén haberá comparacións internas neses subcorpus. De tal modo, haberá unha comparación dentro da disciplina de matemáticas de irlandeses e británicos. E o mesmo sucederá na disciplina de historia.

Por último haberá unha pequena comparación entre varios autores de forma individual, funcionando como representantes de algún dos grupos existentes.

O primeiro capítulo trata do contacto de linguas. Este fenómeno dáse en situacións onde máis dunha lingua está presente nun mesmo territorio. Irlanda sufriu diversas invasións ao longo da súa historia, e os últimos que chegaron deixaron a súa lingua como marca na illa. Desde o momento en que a lingua inglesa foi imposta en Irlanda, os seus habitantes tiveron que aprendela para poder comunicarse, ao igual que ocorre en calquera outra rexión bilingüe do planeta. O que pasou aquí é que o inglés pasou a ser a lingua de dominio e poder, xa que os que gobernaban viñan ou seguían as normas británicas. Deste modo os irlandeses tiveron que aprender a nova lingua por motivos comunicativos ou por considerala como a lingua de prestixio sobre a irlandesa.

O que aconteceu foi que para poder aprender a nova lingua tiveron que facer uso de persoas que xa adquiriran algo de coñecemento, e usaban o irlandés para suplir aquel vocabulario ou gramática que non tiñan. Deste modo o substrato do inglés falado en Irlanda pasou a ser diferente do falado en Gran Bretaña, e aquí é onde aparecen as interferencias entre ambas linguas. Esta interferencia é coñecida e está documentada (Lehiste 1988, Filppula 1990); porén, pode ser que esa interferencia non chegase a moitos aspectos gramaticais da lingua, como podería ser a voz pasiva.

As interferencias lingüísticas non son cousa dun momento, ocorren durante toda a historia, e por iso é importante ver como a lingua chegou a onde está a través da historia de cada territorio. No caso de Irlanda, despois dos pobos prehistóricos, dos que temos información a través da arqueoloxía, chegaron os celtas.

Os celtas chegaron a Irlanda na Idade de Ferro e son os responsables das primeiras mostras da lingua e cultura irlandesas (Ó hEithir 1987). A lingua que falaban

foise desenvolvendo ata chegar a ser gaélico. O irlandés é unha das linguas que chegou aos nosos días, aínda que no é a única; o escocés (gaélico), o galés e o bretón tamén descendem daquela antiga lingua, aínda que no todas seguiron a mesma evolución.

A lingua que estes celtas usaban quedou reflectida en pedras onde se poden observar marcas ou liñas talladas; son as inscricións en alfabeto Ogam. Non foi ata o século V AD, coa chegada de San Patricio, que o latín chegou a Irlanda. O alfabeto latino foi adaptado á forma de falar que tiña a xente desa época, non sen poucas dificultades, xa que a lingua nativa tiña máis sons que a latina e as letras tiveron que ser adaptadas aos sons.

A finais do século VIII chega un novo pobo a Irlanda, os viquingos. Durante case dous séculos estivo este pobo atacando e intentando establecerse na illa, pero os celtas conseguiron evitar todos e cada un dos seus ataques (Duffy 1997b). A lingua deste novo pobo foi absorbida polos celtas e poucos restos temos dela, apenas léxico relacionado coa pesca e o comercio nalgúns zonas de máis influencia.

Ata o século XII, coa chegada dos normandos, os Celtas non tiveron grades inimigos. Os normandos viñan de Inglaterra tras conquistala un século antes, e agora a intención destes anglonormandos era conquistar Irlanda. No primeiro século de batalla os normandos conseguiron conquistar dous terzos da illa, mais todo cambiou no seguinte século. Os irlandeses reconquistaron o seu territorio e incluso converteron os seus inimigos (“Hibernicis ipsis Hiberniores”); chegaron a ser máis irlandeses que os propios irlandeses.

Para revertir a situación, Inglaterra comezou unha política contra os irlandeses, que empezou cos Estatutos de Kilkenny, e que pouco a pouco foi dando froito no aspecto político e de poder. Porén, non conseguiron acabar coa lingua irlandesa, e a finais do século XVIII había máis falantes de irlandés dos que houbera nunca, e un cuarto da poboación era monolingüe en irlandés. A gran fame negra de mediados do século seguinte, e a consecuente emigración, tivo un efecto devastador en Irlanda e na súa lingua. A pesar de todo, a partir de finais do século XIX rexorde o sentimento irlandés tanto na cultura como na lingua, aínda que o número de falantes non volveu ser o que era.

Resumo

A influencia da lingua inglesa no irlandés é moi grande, pero tamén a do irlandés no inglés, que pasou de xeración en xeración con todos aqueles matices adquiridos polos primeiros falantes da lingua.

A historia de Gran Bretaña tamén comeza cos pobos prehistóricos e cos celtas, que aínda que non deixaron unha lingua como en Irlanda, si que deixaron numerosos restos na lingua que foi evolucionando ata hoxe. Despois dos celtas foron os romanos os que no século I BC xa intentaron conquistar Gran Bretaña. Os romanos quedaron na illa ata o século V AD, e despois da súa marcha apareceron os anglosaxóns en escena, que trouxeron e estableceron a súa lingua, que permaneceu case sen cambios ata o século XI (Chambers 1837).

A finais do século VIII os viquingos xa tiñan no seu poder toda a parte leste de Inglaterra, pero da súa lingua non queda máis que algo de léxico. Por último chegaron os normandos, franceses cultural y lingüisticamente falando. A lingua inglesa (dos anglosaxóns) foi moi influenciada polos normandos, aínda que a lingua deles foi desaparecendo a medida que desaparecía a presenza deles.

Tras este contexto histórico, dáse unha pequena visión do que aconteceu en Escocia, onde só se mencionan os pobos prehistóricos, os celtas e os normandos.

Para entender mellor a posible interferencia lingüística, o seguinte paso é facer unha periodización das linguas inglesa e irlandesa (tamén se engade a escocesa ao final). E para finalizar o capítulo faise unha explicación e recapitulación dos vestixios que quedaron no irlandés e no inglés doutras linguas coas que estiveron en contacto.

O capítulo 2 céntrase na época do inglés moderno tardío e da situación sociolingüística de cada século. O primeiro rexistro dun texto en inglés en Irlanda data do século X. Aínda que o seguinte que se conserva é do XIV.

Nos séculos XVI e XVII produciuse a revolución científica, na que Gran Bretaña estaba completamente mergullada. Porén, na mesma época Irlanda estaba sufrindo a conquista por parte dos ingleses.

O seguinte século é testemuña do cambio da sociedade británica cara un uso da lingua inglesa máis regulado e unificado, co resultado da aparición de gramáticas e

dicionarios para facer unha lingua máis estándar. O problema era que os gramáticos non eran especialistas na lingua. O mesmo acontecía cos científicos (palabra que non aparecería ata mediados do século XIX). De igual forma este século ve como a ciencia pasa a ser parte central da vida social e intelectual; e por outro lado tamén testemuña o comezo do declive da lingua irlandesa, provocado en parte pola educación ofrecida nos centros educativos, onde a autoridade era inglesa.

O século XIX arranca coa unión política de Irlanda e Gran Bretaña, que pouco a pouco levou á lingua irlandesa a ser unha lingua minoritaria. No apartado científico cabe salienta un aumento da actividade en casas privadas, normalmente de xente adiñeirada, o que provocou unha maior participación das mulleres nun campo case prohibido para elas ata ese momento.

O apartado dedicado ao discurso científico céntrase na linguaxe científica como vehículo de comunicación para a divulgación de descubrimentos y experimentos científicos. O problema deste termo é a súa definición, xa que cada disciplina que se trate vai ter unhas características propias (Gutiérrez Rodilla 1998), aínda que comparta outras xerais coas demais.

Este estudo trata de textos, polo que o termo escritura científica sería máis apropiado. Este concepto está incluído no discurso científico e implica que o científico adapta o que quere expresar aos requisitos e estruturas propias da actividade científica que realiza. Esta actividade científica, a ciencia, ten un significado diferente dependendo da época ou século en que se trate. O concepto non sufriu moitos cambios entre os séculos XIV e XVII, pero a revolución científica cambiou todo, e a “ciencia”, tal e como a consideramos hoxe en día, non foi tal ata finais do século XIX.

Algúns dos elementos que caracterizan o discurso científico están explicados aquí, como a formalidade e obxectividade á hora de escribir, a claridade de expresión, ou o uso dun estilo de linguaxe que non varía, cunha lingua especializada chea de termos técnicos acorde co tema a tratar.

Un dos elementos considerados característico da linguaxe científica é a voz pasiva, e por iso o seguinte capítulo está enteramente dedicado a ela, como elemento gramatical central para a análise dos textos desta tese doutoral.

O capítulo é bastante denso e está dividido en oito seccións. A primeira delas fala da estrutura da voz pasiva. o primeiro que hai que facer é definir o concepto

Resumo

gramatical en si. As construcións chamadas pasivas teñen as seguintes características, segundo Siewierska:

- a) o suxeito da oración pasiva é o obxecto directo da correspondente oración activa,
- b) o suxeito da oración activa convértese no axente na oración pasiva,
- c) o verbo está en voz pasiva.

Nesta sección ofrécense diferentes oracións pasivas dependendo do tipo de relación gramatical que hai en cada unha delas e entre os demais elementos da oración. Así temos autores que falan de pasivas persoais e pasivas impersoais (Siewierska 1984, Carnie & Harley 2005, Werner & Leiss 2006), que se forman con verbos transitivos ou intransitivos. Outro concepto é o de pasiva reflexiva (que tamén poden ser persoais ou impersoais).

No aspecto sintáctico hai autores que falan da diferenza entre a voz activa e a voz pasiva e as súas implicacións, así como os tipos de verbos que poden ir en cada unha. E en canto á semántica temos a distinción entre pasivas verbais e pasivas adxectivas (Toyota 2003), onde as primeiras teñen un participio verbal e as segundas un participio adxectivo. Estes dous conceptos non se manteñen nos autores, aínda que si a idea. No caso da pasiva verbal o participio indica movemento, mentres que o adxectivo é estático. Esta circunstancia leva a outros autores (Embick 2004) a falar de pasivas de estado y pasivas de resultado, onde a primeira reflicte o estado de algo, e a segunda o resultado dunha acción.

Tamén temos o punto de vista morfolóxico para clasificar pasivas, e aquí falaríamos de pasivas perifrásticas e pasivas morfolóxicas, dependendo de se levan un verbo auxiliar (no primeiro caso) ou un afixo pasivo (no segundo caso).

En canto á formación da pasiva, temos diferentes visións de autores que falan sobre a construción do verbo auxiliar e o participio que leva a continuación, como esa estrutura está formada e como funciona dentro dunha oración.

A última parte desta sección céntrase nos diferentes tipos de pasiva que diferentes autores identifican. Así, a primeira clasificación sería pasivas básicas e complexas (Keenan 1985). As básicas carecen dunha frase que funcione como axente, teñen un verbo transitivo como verbo principal que expresa a acción, e o suxeito é o

axente e o obxecto o paciente. Para as complexas este autor as divide en catro tipos, aínda que non todos existen na lingua inglesa.

Outro termo que se explica é o de pasiva dobre, relacionado cos conceptos de pasiva interna e pasiva externa (Akimoto 2000). E os autores tamén falan da pasiva progresiva (Hundt 2004), aínda que non foi moi ben recibida nos séculos XVIII e XIX por competir co chamado “passival”, un uso anterior da activa progresiva con significado pasivo (“The house is building”).

As pasivas directas e indirectas tamén se tratan nesta sección, ao igual que as pasivas que promocionan e as que non, ou as pasivas enteiras ou truncadas, é dicir, que levan axente ou non.

A terceira sección deste capítulo fala de certas restricións que poden ocorrer na voz pasiva, como é a imposibilidade de que na lingua inglesa se poida facer unha pasiva impersoal a partir dun verbo transitivo.

A perspectiva histórica da voz pasiva trátase na seguinte sección, explicando a evolución que esta estrutura sufriu ao longo dos séculos ata chegar o momento actual deste estudo.

E os verbos auxiliares “be” e “get” na formación da pasiva son explicados na sección 6. Na case totalidade dos casos o verbo “be” é preferido sobre “get” para formar a pasiva. Estes autores están de acordo coa existencia da pasiva co verbo “get”, aínda que con diferentes matices, non é intercambiable coa pasiva con “be”, teñen diferentes significados (Downing 1996, Lakoff 1971).

Ofrécese unha pequena interpretación pragmática da pasiva na seguinte sección, antes de pasar á dedicada á voz pasiva en irlandés. Nesta sección fálase da diferenza entre o inglés e irlandés na orde das palabras, xa que mentres que o inglés segue a orde suxeito+verbo+obxecto, o irlandés comeza co verbo para seguir co suxeito e terminar co obxecto (verbo+suxeito+obxecto). Esta diferenza vai determinar tamén a voz pasiva, que en irlandés se fai cunha forma autónoma do verbo, é dicir, fórmase morfoloxicamente, unha única palabra engloba todo (suxeito e verbo). Tamén existe en irlandés unha construción perifrástica co verbo ser (tá) máis un nome verbal ou un adxectivo verbal, que ás veces se considera tamén como pasiva.

Por último, o capítulo cerra cunha explicación da pasiva en escocés, que aínda que ten a mesma orde de palabras que o irlandés (verbo+suxeito+obxecto) non

Resumo

comparte o modo de formar a pasiva, xa que a forma como o inglés, co auxiliar e o participio do verbo.

O capítulo 4 contén a información relevante aos textos e autores que os escribiron. Como xa expliquei antes, son 32 autores seleccionados cada 25 anos entre 1725 e 1925. Os textos teñen arredor de 10.000 palabras, seguindo un dos criterios establecidos para os textos do *Coruña Corpus (CC): A Collection of Samples of English Scientific Writing*. Ofrécese unha pequena biografía dos autores apra saber a súa procedencia e educación e algún outro dato relevante á hora de analizar os textos. Tamén hai unha pequena comparación entre os autores, as súas vidas, etc., incluído aqueles que é probable que tivesen unha lingua materna diferente da inglesa (aínda que todos eles son nativos en lingua inglesa tamén).

Este capítulo remata cunha explicación xeral dos diferentes tipos de texto que hai e que poden estar relacionados coas posibles interpretacións e análises que se poden facer dun texto. No meu caso a análise estará baseada na variación sociolingüística.

O seguinte capítulo, o 5, mostra os resultados obtidos na análise. Estes resultados están clasificados en tres seccións. A primeira mostra a análise cuantitativa, que vai estar dividida, como xa quedou explicado ao inicio, or variables. Primeiro será a variable de disciplina a que se teña en conta. Unha vez feita, separaranse as dúas disciplinas e a análise farase dentro de cada unha or orixe xeográfica dos autores. Por último a comparación e análise será unicamente por orixe xeográfica.

Feitas estas comparacións sobre os números totais de elementos da voz pasiva, a seguinte sección se enfocará na clasificación dos verbos léxicos obtidos. E dentro deles, outra vez haberá unha comparación por disciplina e por nacionalidade.

A última sección do capítulo estará centrada no resto de elementos da frase verbal: o uso do axente, os auxiliares, e os verbos modais. E finalmente haberá unha comparación de varios autores de forma individual.

O derradeiro capítulo é o das conclusións. A conclusión principal é que non se observa ningunha interferencia lingüística do irlandés sobre o inglés na voz pasiva nos

textos seleccionados. Hai diferenzas entre algúns dos subcorpus, como no uso dos verbos modais, que no subcorpus de matemáticas aparecen o dobre de veces que no de historia. Isto é debido ao concepto de modalidade que posúen eses verbos, e que se emprega á hora de facer hipóteses, por exemplo, como é o caso nos textos de matemáticas. Algo semellante é o que se pode observar co tipo de verbos semánticos. Nos textos de matemáticas hai un certo número de verbos que se poden identificar coa disciplina que tratan. Pola contra, nos textos de historia os verbos que se repiten son os de comunicación, aqueles que serven para narrar, que é o que fan os historiadores.

Por último apuntar que nalgún dos textos analizados de forma individual destaca algún elemento que podería ser considerado como influenciado polo irlandés, pero que no resto dos autores non se ve.

Con todos os resultados obtidos, esa posible interferencia lingüística que se buscaba non se aprecia nestes textos científicos dentro da voz pasiva.

