Universidad de Valladolid

Facultad de Filosofía y Letras

Grado en Estudios Ingleses

The Effectiveness of Persuasion: Analysis of the Covid-19 Vaccines TV Advertisement in Anglo-Saxon Countries and their Impact in Citizens' Behaviour

Alumno: Diego Cano Puertas

Tutora: Lucía Sanz Valdivieso

Departamento de Filología Inglesa

Curso: 2021-2022

ABSTRACT

Covid-19 vaccination campaigns have been a trending issue all over the world, and investigations are needed for the analysis of the different factors which surround their setup and effectiveness. The research developed in this work shows the analysis of different television adverts concerning national Covid-19 vaccination campaigns, and their further effect on society. To do so, a corpus consisting of transcriptions of these adverts from Anglo-Saxon countries was compiled. The process of compilation was manual, selecting the transcriptions of different adverts which were later added to the corpus. Then, different epistemic modal and deictic elements present in the samples were analysed as indicators of linguistic persuasion strategies. Finally, the results were compared to the vaccination rates of each country to try to find a pattern of relationship. At the end, the results show a seemingly indirect relation between the use of the persuasive elements analysed and the amount of citizens vaccinated.

KEY WORDS:

Vaccination, Covid-19, deixis, persuasion, discourse analysis, advertisements

RESUMEN

La importancia de las campañas de vacunación contra la Covid-19 son un asunto reciente considerado de importancia global por la mayoría de la sociedad. A raíz de ello, esta investigación busca indagar en la efectividad y la utilidad real de los mecanismos de persuasión lingüística en los datos de vacunación y el comportamiento de dicha sociedad respecto a estas campañas. A partir de un corpus lingüístico formado por anuncios televisivos gubernamentales parte de las campañas nacionales de vacunación contra la Covid, compilada manualmente de fuentes oficiales, se compararon los mecanismos de persuasión que utilizaban dichos gobiernos, concretamente, elementos de modalidad epistémica y deixis. Tras recabar esta información, se realizó una comparativa entre los datos de vacunación y el número de estrategias persuasivas utilizadas, para finalmente concluir que parece existir una correlación indirecta entre dichos datos de vacunación y las estrategias persuasivas que objeto de este estudio.

PALABRAS CLAVE:

Vacunación, campaña, Covid-19, anuncios, persuasión, análisis del discurso

CONTENTS

INTRODUCTION

1.1 Context

Covid-19 is a disease which has, quite simply, transformed and shaped our lives. Therefore, the phenomena surrounding this pandemic needs to be thoroughly studied, as well as the general behaviour of society, to grasp the relevance that it has had in the entire world. As the pandemic quickly advanced and spread, vaccines seemed to be more and more necessary. However, when the Covid-19 vaccines arrived, mixed opinions about them arose among the general public. One of the reasons popular opinions are important to investigate is that this issue caused the whole world to argue about future side-effects, possible heart malfunctions, governmental complots, conspiracy theories, and other non-scientific arguments which potentially have had, nonetheless, a real impact in citizens' decisions.

In this sense, governments are arguably one of the most entrenched and far-reaching sources of public influence there can be in a country. In addition, they know, thanks to communication experts, how to use persuasive strategies and direct them to their target audience via language (through different media like adverts, campaigns, speeches, press releases, etc.). Their intentions might in some cases be eminently demagogic, mostly because of the need of the different members of the government to adapt to the trending matters of society, while seldom adopt an upstream position that might not be beneficial for their interest.

Furthermore, the influence governments' discourse has on society makes it an important subject of analysis due to their reach and the extent to which it can alter people's everyday life. At the same time, a pandemic that has changed our lives deserves to be studied, as well as the linguistic choices of influential authorities regarding the pandemic, which might ultimately provide clues about the actual behaviour of society. Governments—as well as other non-state agents—can take advantage of the vulnerability of people to insert a particular version of reality (i. e., the most suitable for their interests) into the public mindset, and people will most likely believe institutional sources, since the government is mostly regarded as an official, authoritative and reliable source.

In an era where fake news are so widespread, and where the resources used to inform ourselves often have little credibility, people might have problems distinguishing which information is real and which false; and scientific approaches must be put at the general public's service informing citizens so they do not let themselves be persuaded into making a decision or another.

The persuasive strategies followed by governments encompass a wider variety than other types of speech, with most politicians, representatives and institutions dominating the classical pillars of persuasion (ethos, pathos, logos), as well as incorporating other strategies to their repertoire depending on the general audience's reaction. In the case of this work, the focus is on the reasons society should get vaccinated or not, or what position they should adopt towards that topic. Adding up to these three original strategies of persuasion, there are also some other (mostly linguistic) ones, such as the use of vocatives, some literary resources such as alliteration, or the repetition of key words.

In this context, the main goal of this work is to study the language used by different governments, and, specifically, to analyse the type of persuasive strategies used in their audio-visual production for Covid-19 vaccination national campaigns. In the case of our study, we are going to focus on the ways governments encourage vaccination in audio-visual content through the analysis of epistemic modality and deixis. Then, each countries' vaccination rates will be compared to the amount and type of persuasive strategies employed in national vaccination campaigns to attempt to identify a potential relationship between the language used and the actual way in which the population behaved regarding vaccination, while acknowledging the multitude of parallel persuasive strategies used apart from linguistic ones. Hence, the aim of this work is to test the effectiveness of different approaches to linguistic persuasion in modifying citizens' behaviour.

Governmental language can reflect the state of some topics of social interest (such as, for example, vaccination against Covid-19). In spite of the relevance of the topic, this study is also motivated by a gap in the scientific literature as well as the insufficient amount of data and studies which explore this issue in particular. More specifically, this research work attempts to determine what persuasive linguistic

resources are more successful in modifying the general public's behaviour in nations of Anglo-Saxon cultural background. Therefore, results could potentially orientate governments about the adverts they can use to gather a more effective response from the public, as well as revealing the extent to which different persuasive strategies are effective.

To achieve this, corpus linguistics will provide a reliable and objective approach to the study of language, which will be used in order to analyse text production and conduct a feasible and coherent analysis. Nevertheless, an operationalization of the different persuasive strategies has to be made in order to study the effectiveness that campaign advertisements have had in the general public's view towards Covid-19 vaccination. Because the relevance and the sensibility of this subject are undeniable, this work will analyse official data only, collected from institutional sources compiled into a corpus and for all vaccination figures involved. Also, to verify the data obtained is reliable, different automatic and semi-automatic corpus linguistics software tools will be used.

Results will not only be of interest for linguistics academics, but they will also reveal valuable information regarding a currently relevant aspect of life. In addition, results stemming from this study will be of interest for non-expert audiences too, since the subject matter affects any and all countries' citizens, mostly because the average citizen will be made aware of why they feel more persuaded by a certain governmental advert than another. Thus, this study will be of interest for linguistics, rhetoric, discourse and public communication experts; but it will also help the common citizen unveil data about one of the most meaningful aspects of current everyday life.

THEORETICAL BACKGROUND

Essentially, the broad concern of this work—to analyse the way language can affect and modify reality—is based on "a poststructuralist or Foucauldian notion of discourses as ways of seeing the world whose linguistic expression surfaces intertextually" (Motschenbacher, 2018, p. 151). This topic has already been studied in correlation with Covid-19 and Covid-19 vaccines, and many relationships between

language and reality have already been found. For instance, some of the studies done during the last few years have made use of the Twitter Intelligence Tool (TWINT) to study the amount of anti-vaccine discourses and interactions regarding the topic in social media (Durmaz & Hengirmen, 2022); other studies compile a linguistic corpus consisting of different texts from politicians to compare them using different tools for the purpose of knowing the influence of Covid-19 in the discourse of the election candidates (Rivas-de-Roca, 2021). All the data used in these studies were compiled through the use of keywords (such as *Covid-19*), since it is one of the most effective ways of searching for them, and also because it "ensures the objectivity of the sample and facilitates later retrieval" (Rivas-de-Roca, 2021, p. 5).

In terms of governmental adverts, some authors point out that "research […] tends to employ two dimensions: positive versus negative ads (which correspond to our functions of acclaiming and attacking), and issue versus image (which correspond to our topics of policy and character)" (Benoit et al., 2003, p. 164). Different studies, such as the ones performed by Kaid & Johnston (1991), West (1997), or Jamieson et al. (2000), also performed a study on the different campaign ads commissioned by governments. In other words, in most cases "the literature on the nature of political advertising tends to divide political advertisements into those which are positive (acclaiming) and negative (attacking) commercials" (Benoit et al., 2003, p. 165).

Together with this, the present study is largely based on the concept of persuasion and the different forms its linguistic representations can take, using a CDA (Critical Discourse Analysis) approach. First of all, Critical Discourse Analysis is understood in this work as "the discipline devoted to the investigation of the relationship between form and function in verbal communication" (Renkema, 2004, p. 1). This approach to the study of governmental ads has been deemed suitable since "CDA naturally shares ground with politics and political actors, and a great deal of work in the field has been devoted to PD [political discourse]" (Filardo-Llamas & Boyd, 2017, p. 315).

The use of linguistic strategies to persuade the reader is also defined within the broader concept of *metadiscourse.* The definition of this concept has been a topic of debate for some time between different linguists and researchers. Regarding this matter,

Hyland (2005, p. 17) states that "the decisions we make when interacting with others, whether to use an active or passive verb, a categorical or hedged assertion, a contrastive or additive conjunction […] are therefore choices motivated by intentions to express certain meanings in specific situations". This approach towards metadiscourse is shared by other linguists such as Halliday. Furthermore,

> [m]etadiscourse reveals the writer's awareness of the reader and his or her need for elaboration, clarification, guidance and interaction. In expressing an awareness of the text, the writer also makes the reader aware of it, and this only happens when he or she has a clear, reader-oriented reason for doing so. (Hyland, 2005, p. 17)

For the study of our subject, and for our research to not be troubled by different approaches towards *metadiscourse*, this concept will be understood as all the linguistic realizations which highlight subtle characteristics of the textual production, as well as allow the researcher to study the subliminal discourse concealed between the direct and textual approach.

In order to focus our study towards epistemic modality, deixis and the deictic centre in the governmental adverts that this work analyses, we are going to restrict our research to the *interactive metadiscourse* aspect (Hyland, 2005, p. 124). There have already been some works which have studied this topic before, as "[m]any of these studies have expressed results in terms of the overuse or underuse of particular devices relative to native speaker practices for similar stages of cognitive development and genre" (Hyland, 2005, p. 125).

One of the most important studies about this discursive subsection was undertaken by Mauranen (1993), in which the researcher

> [p]rovides an analysis of metadiscourse elements which serve text-organizational purposes, such as connectors (and, so, as a result), reviews (so far we have assumed that ...), previews (we show below that ...) and illocutionary action markers (the explanation is ...) […] [t]hese elements do not add any prepositional information to a discourse but serve to make explicit relations that are already there in the text by virtue of the meanings of the propositions that they link. (Hyland, 2005, pp. 126-127).

In this context, persuasion could be defined as "all linguistic behaviour that attempts to either change the thinking or behaviour of an audience, or to strengthen its beliefs, should the audience already agree" (Halmari & Virtanen, 2005, p. 3). In most

contexts, persuasion can be created through specific linguistic mechanisms which have been defined through history in a diverse number of ways. However, the definition proposed by Aristotle is still standing and is widely accepted as well as being the most common way of understanding the notion of *persuasion*.

> The Aristotelian conception of persuasion distinguishes between Ethos, which is interpreted as the voice and message of the communicator (mostly to assure their credibility); Pathos, which is regarded as the way of communicating (emotional part of the speech) and Logos, an activity which is considered by Aristotle as the usage of information in order to convince a specific audience (rational part of the speech) (Shabo, 2010).

However, "Aristotle does not pursue in detail the connection between the linguistic and political make-up of humans, but the implications have a fundamental importance" (Chilton, 2004, p. 5). Still, for persuasion to happen, an audience is very much required. The particular linguistic realization of persuasion may vary before different crowds, enforcing a concrete facet of persuasion usually depending on the context:

> [r]egardless of the type of text (political speeches at congresses, at popular rallies, governmental flyers, adverts...), the 'elite' discourse of politicians, mass media outlets, big businesses and celebrities is especially important to understanding the production of cultural politics because these 'powerful speakers' can to a significant degree select and control the 'semantic macrostructures' of national debate and public imagination (Whitham, 2021, p. 72).

This means that "the nature of persuasion can differ […] [with the] usage of associative engineering–evasion, belittling, distancing" (Halmari & Virtanen, 2005, p. 8, 19). Therefore, a government's communication team in question needs to use all the persuasive strategies available to convince their audience.

There have already been a great number of works which have studied this topic, and the usage of discourse's characteristics by different politicians and governmental organizations. For instance, Van Dijk (2009) studies the context of the language used by politicians focusing on deictic expressions used during their speeches, thus obtaining certain data or evidence showing new links between power relations and discourse strategies performed through linguistic structures—in fact, Van Dijk (2009) is a landmark work for this type of analysis because it opened the door for a more complete approach from different areas which had not been combined before. This same method

can be applied in the study of different types of governmental media, such as adverts (this work's subject of analysis), but also speeches, press conferences, letters, etc.

2.1. Linguistic realizations of persuasion: deictic centre

To study persuasion in governmental discourse, this study will focus on the presence and direction of deictic elements towards the deictic centre in Covid-19 vaccine national advertising campaigns in Anglo-Saxon countries. More specifically, the aim of this work is to attempt to find a pattern or relationship between the usage of deixis in shaping persuasion and its effect in public behaviour. The main purpose of linking both the concepts of deictic centre and persuasion through language is to find a connection between the effectivity of language and the context in which the action is situated. In the case of the discourse spread by governments, this aspect is a rich ground for analysis due to the substantial number of strategies used in them. In this sense, according to Jeffries (2010, p. 148),

> [t]he general effect of deixis is to construct a focus on the particular time, place and social circumstance of the interaction which is underway. Thus, at a simple level, the place where the interaction is occurring is *here*, and the time it is occurring is *now*, the speaker is *I* and the addressee is *you*. This focal position in time and space (we will come to social positioning later) is known as the 'deictic centre' of the speaker.

The purposeful location of the deictic centre in a particular way is very frequently used in the political sphere. Nevertheless, the deictic centre is predominantly employed to put an audience in context, so that the speaker has a better reception (and perception) by the crowd. The deictic centre can be constructed and boosted with techniques similar to the ones used to persuade an audience, through "the use of the first person (I), the present tenses (am, are, knows etc.), the proximal adverbs and prepositions (here, near) and the time reference (lunchtime)" (Jeffries, 2010, p. 150).

Van Dijk (2009) explains the different deictic strategies, as well as other noteworthy factors: The category of models pertaining context contains both time and place as some of its central elements. Specifically, people usually refer to their position both in place and in time, similarly to what they do when speaking or reading. This information is subsequently used for the interpretation of certain deictic written and

spoken, forms as well as "for temporal forms of verbs, the orientation of narrative structures in storytelling, the future time frame of predictions and commands, and so on. These are general contextual properties of all discourse" (Van Dijk, 2009, p. 126).

More particularly, for the categorization of person deixis, to obtain information about the deictic centre, this study will be focusing on the classification proposed by Halliday & Hasan (1976). This classification is divided into two subcategories: speech roles and other roles. According to Halliday & Hasan (1976, p. 44),

> [t]hese items are all reference items; they refer to something by specifying its function or role in the speech situation. This system of reference is known as person, where 'person' is used in the special sense of 'role'; the traditionally recognized categories are first person, second person and third person, intersecting with the number categories of singular and plural.

Similarly, time deixis is also of the greatest significance because "like all aspects of deixis, time deixis makes ultimate reference to participant-role" (Levinson, 1983, p. 73). In his analysis of the features and the linguistic representations of time deixis, Levinson states that there is a certain number of elements of "pure" time deixis. In them, no contact with non-deictic methods of time is seen. These are "tense […] and the deictic time adverbs like English now, then, soon, recently and so on" (Levinson, 1983, p. 74).

In this context, the shifting of the deictic centre is the variable which is the most effectively used in ideological discourses, where linguistic features expressing time and setting, among others, allow the speaker to direct their discourse. Jeffries refers to the process of choice of these mentioned strategies as deictic "decisions", while stating that these decisions depend on

> [w]hether the viewpoint will shift from person to person or remain constant; whether the viewpoint will reflect the point of view of a character, despite being in the third person; whether the shape and properties of places and artefacts will reflect the reader's own experiences and if/how the text will shift from one deictic centre to another (Jeffries, 2010, p. 153).

According to Wodak and Mayer, there is a "prominent role of the pronoun 'we' in legitimizing government action and deflecting its public accountability" (Wodak & Mayer, 2009, p. 12). As Wodak and other researchers further state in another study, the

usage of *we* to study the political language and the persuasive deictic benefits that governments can obtain from its application are evident. They also consider that:

> [T]he use of the personal pronoun 'we' – including all its dialect forms and the corresponding possessive pronouns – appears to be of utmost importance in the discourses about nations and national identities. 'We' can have very different referents according to the respective situation.″ (De Cillia et al., 1999, pag 163).

These researchers also regard the personal pronoun "we" as a "constructive strategy", which are understood as the strategies that "encompass those linguistic acts which serve to 'build' and establish a particular national identity" (De Cillia et al., 1999, p. 160). Consequently, the pronoun *we* can be used alongside others, according to De Cillia et al., to refer to the general audience in a particular situation.

Regarding this issue, "[t]he first person plural pronoun 'we' is the most complex among its type and can encompass all other personal pronouns." (De Cillia et al., 1999, p. 164). Therefore, and according to this research, *we* is one of the pronouns that carries more illocutionary force and, therefore, one of the preferred ways for politicians to express their intentions to the public. Based on what has been discussed in works on this matter, this pronoun does not only have quite a strong illocutionary force, but also can be extended to other situations, as

> linguistic studies usually distinguish between an addressee-inclusive and addressee-exclusive 'we', and between a speaker-inclusive and speaker-exclusive 'we'. The categorization remains fairly general, as in some cases the references cannot be clearly specified (De Cillia et al., 1999, p. 165).

"[w]e may assume that categories such as deixis and pronouns can be analysed in any linguistic methodology, but they seem crucial for CDA." (Wodak & Meyer, 2009, p. 21).

In sum, the present work will target personal pronouns within its analysis of deixis in the samples under study. Incidentally, possessive pronouns are going to be excluded from the analysis due to their complexity and the different areas of language they may have a role in, such as metaphors. Regarding time and place deixis, it is verbal tenses as well as adverbs of time and place that will be analysed.

2.2. Linguistic realizations of persuasion: epistemic modality

Another linguistic feature used to shape the reality portrayed through discourse is the use of epistemic modality. Epistemic modality could be defined as "a meaning of modal forms […] concern[ing] the likelihood (or unlikelihood) of something being the case" (Jeffries, 2010, p. 117). Epistemic modality also "relates to the range of certainty that a speaker may express, including strong certainty as well as weak certainty" (Jeffries, 2010, p. 117).

In this context, this research work will cover the study of epistemic modality through modal verbs. In addition, this work considers as well a set of targeted items based on Hyland's classification of metadiscoursal items (Hyland, 2005, pp. 218-224). Taking into account the theoretical framework above, it is *attitude markers, engagement markers, boosters* and *hedges* that Hyland identifies that are going to be targeted to complete the analysis of epistemic modality, together with modal verbs. According to Hyland (2005, p. 220), all of these categories belong to interactional metadiscourse, that is, the discursive subsection which retrieves and studies the dialogues and interactions between an issuer (in our case, governments or governmental departments), and a receiver (in our case, the audience and the general public).

Epistemic modality, which is certainly going to be a key point in our approach to adverts promoted or endorsed by governments. According to Fairclough (1992, 2003), "modality includes any unit of language that expresses the speaker's or the writer's personal opinion of or commitment to what they say, such as hedging (I believe/think/suppose), modal verbs, modal adjectives and their adverbial equivalents" (Machin & Mayr, 2012, p. 186). This type of modality and its study can be especially useful when exploring governmental discourse, mostly because they refer to the knowledge presupposed to the audience: "[t]his type of modality is said to be "concerned with the speaker's assumptions, or assessment of possibilities, and, in most cases, it indicates the speaker's confidence or lack of confidence in the truth of the proposition expressed" (Coates, 1987). As most statements made by governments as a whole are facts rather than suppositions, they can be expected to be more objective than partisan political discourse.

The main items studied in this research will be modal verbs, since these structures carry a notorious epistemic value, as well as being an important component of persuasion are the particles which carry the most value (speaking about modality), and to elicit from them the attitude of the announcer when using these verbs. Machin & Mayr state that "epistemic modals show how certain you are something will happen, or is the case" (Machin & Mayr, 2012, p. 187).

Other approaches to persuasion which are commonly undertaken in order to analyse different linguistic data revolve around the research of metaphors and other common stylistic resources, concerning their usage amongst the general public. All the other aspects, however, are more subtle but still relevant for the discourse itself and for its future analysis, mostly because "the latter includes many features that are not only hidden, but may also be unconscious on the part of the text producer" (Jeffries, 2010, p. 9). It is also worth mentioning that both metaphors and metonymy are constantly evolving and, therefore, cannot remain ankylosed in a certain epoch when compared to another (Filardo-Llamas, 2022). Having said this, "[b]oth metaphor and metonymy are frequently used in the language of politics. They are only one aspect of political discourse, but they are useful starting points for looking at some of the ways in which political language has ideological implications" (Beard, 2000, p. 19). These elements, however, remain out of the scope of this study due to material constraints.

In this context, this study will try to describe the effect that governmental adverts have had in the general public's Covid-19. In sum, the persuasive techniques of interest for this study will be analysed through the operationalization of certain linguistic forms as expressions of such techniques: modal verbs and Hyland's aforementioned expressions (2005, pp. 218-224) (modality), personal pronouns excluding possessives (person deixis), and verbal tense, together with time and place adverbs for the study of time and place deixis.

MATERIALS AND METHODS

3.1. Corpus description

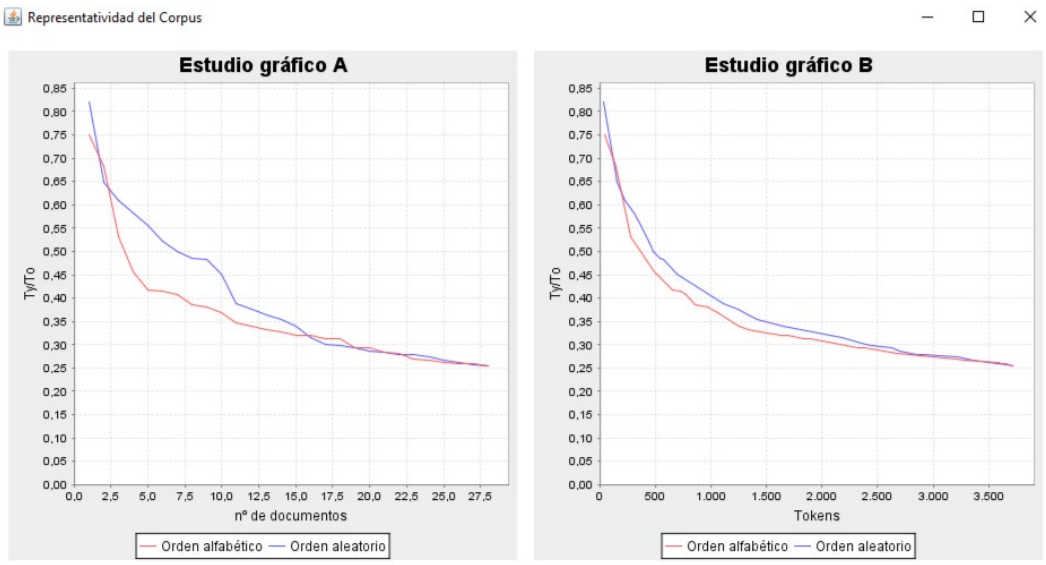
Corpus linguistics implies the exploitation of a Corpus, which, according to Sinclair (1991, p. 171), "is a collection of naturally-occurring language texts, chosen to characterize a state or variety of a language". Because corpora have to fit the purpose of the research, the most appropriate way of studying and analysing the persuasive effect that governmental discourse has on the general public, without other factors interfering in the research, is to analyse televised national adverts. These adverts belong to different countries' Covid vaccination campaigns (specifically, from the USA, the UK, Australia, Canada, Ireland, and New Zealand). While press releases or other governmental text types may have a plural objective, the only aim of the selected type of text (ads belonging to vaccination campaigns) is to convince the population to get vaccinated. Hence, the compilation criteria were that the samples belonged to the genre of governmental adverts, which are focused on the promotion of Covid-19 vaccination campaigns in Anglo-Saxon countries. The number of samples varies from one country to another, mostly due to availability constraints.

In practical terms, the transcripts of the governmental adverts were obtained as follows: I searched for videos that belonged to governments' official websites or channels in Google, the world's most widely used search engine. Given the fact that all the files of my corpus were ultimately nested in YouTube, I used the "Transcribe" function that YouTube includes in their site. However, it should also be remarked that the transcription YouTube provides is sometimes automatic and might not be fully accurate. Therefore, these transcriptions had to be manually revised in order to correct some of the mistakes caused by the automatic transcription process.

To obtain machine-readable samples, the transcripts were saved in .txt files, using UTF-8 codification and labelling the files with a descriptive filename, such as *001_AD_USA_16_03_22*, with 001 being the name of the file, AD indicating the type of media document, followed by the country (United States), as well as the date in which the advert was uploaded and published (day, month and year). Once all the text was extracted from the videos and manually revised, they were compiled and classified to create the corpus to be analysed.

In sum, the corpus contains eight samples from the USA (with a total number of 630 tokens), five samples from the UK (with a total number of 1398 tokens), six samples from Australia (824 tokens), five samples from Canada (287 tokens), three samples from Ireland (282 tokens), and finally two samples from New Zealand (241 total tokens). This information can be found in the corpus 0 (Appendix 1).

At this point, it is of utmost importance to ensure that the corpus is representative and that it complies with the adequate size requirements. In this study, given the naturally insufficient amount of data available about the topic, a small corpus was analysed. The corpus was then interpreted as representative of the discourse under study, since the small number of samples and the communicate event observed is restricted to a very specific point in time, i.e., from the moment vaccines were commercialized (end of 2020 approximately) to the present day. Hence, the totality of televised advertisements from Anglo-Saxon countries on the Covid-19 campaign available, despite being a rather small genre, has been compiled for the corpus. For that matter, the corpus' representativeness was tested through *ReCor*.



Graph 1: *ReCor* representativeness results

The test performed by *ReCor* shows that corpora start to be representative at the point where both the red and blue lines stabilize and meet each other in the graph. Thus, this corpus starts to be quantitatively representative at an amount of around 2600 tokens

(the corpus has a total number of 3662 tokens) and that it begins to be qualitatively representative at around 16 files (this corpus consists of 29 files). Therefore, it can be confirmed that the corpus used for this research is quantitatively representative.

Besides, the corpus used in this study can be considered as qualitatively reliable since it contains data obtained exclusively from official governmental sources representing nations of Anglo-Saxon cultural background.

3.2. Data Analysis

After the process of compiling the corpus had concluded, and after guaranteeing the corpus was representative, the analysis focused on the linguistic persuasive structures previously defined: modal verbs, hedging expressions, personal pronouns excluding possessives, verbal tense and adverbs of place and time.

The analysis of the samples was performed through different corpus linguistics tools. With the different tools available, I could compare word frequency and concordances, as well as other linguistic characteristics, to draw conclusions from the different results obtained.

To start the analysis, described in detail in the following sections, I used two main corpus software tools which helped in the process: *TagAnt,* and *Lancsbox.* Using *TagAnt* (Anthony, 2022), the corpus was automatically POS-tagged, which allowed for the retrieval of pronouns, adverbs, modal verbs, and the identification of verbal tense; and *Lancsbox* (McEnery et al., 2020), was used to look at the frequency and linguistic context of the aforementioned modality and deictic centre markers (that is, the targeted items themselves), which allowed for their quantification and classification.

3.2.1 Epistemic Modality

To study epistemic modality, I firstly had to search for modal verbs by using an exclusive *Lancsbox* feature, with which you can search for the results of certain grammatical categories by typing the category in capital letters. In this case, it would be "MODAL". The items included in this category were the modal verbs *could*, *might*, *may*, *can, will* and *won't* (which belong to the possibility/probability subdivision), and certain forms of *can* (which belong to the ability subdivision). On the other hand, I obtained the hedging items and expressions by looking at the metadiscoursal element

list proposed by Hyland, in a global category which he defines as "interactional metadiscourse" (Hyland, 2005, p. 220), as mentioned before. This search included expressions such as *actually*, *no doubt* or *obviously*. An adaptation of the full list compiled by Hyland (2005) can be found in the appendix 2 below.

The POS-tagged corpus was loaded into the software, and the KWIC window was selected. In addition, I searched for the different grammatical categories which were to be analysed, firstly looking at epistemic modality (in this case, modal verbs, by searching for "MODAL" in capital letters, as well as manually looking for the hedging devices appearing in the classification already mentioned using them as keywords). The results were then gathered and compiled in a *Microsoft Excel* file in order to compare the frequency of each item in the different categories mentioned.

The obtained results were manually revised in order to discard inaccurate findings (such as errors in the automatic tagging of the corpus). In the case of modal verbs, these results were classified into the different types of modals: possibility/probability and ability.

Besides, a normalization process was subsequently performed on the numerical data in the *Microsoft Excel* file, with the aim of standardizing the items by calculating their relative frequency rate per 100 words. This is due to the fact that samples are different in size and hence a clear comparison could not be drawn from raw results.

3.2.2 Person deixis

In the case of person deixis, the process of obtaining the final results was similar to the search for epistemic modality expressions. Firstly, I searched for the personal pronouns' tag (_PP), and then looked at the different occurrences of personal pronouns in the corpus. After this, the occurrences were manually selected to avoid non-deictic uses of pronouns as well as possessive pronouns which are out of the scope of this work (as discussed in section 2). Results were classified according to the grammatical person and number of each pronoun giving place to six divisions: first, second and third person singular and plural. After this, the normalization process on a base of 100 was calculated to allow for comparability of results. These data were also recorded and classified in the *Microsoft Excel* file.

3.2.3 Time and place deixis

The classification of both the time and place deictic items was made in two different categories: close to deictic centre (e. g. *now*, *here*, *today,* and present verbal tense) and far from deictic centre (*there*, *then*, *next year,* and past and future verbal tenses). A further category, Undetermined, was created for those place and time adverbs which were not clearly part of any of the two categories above, such as some instances of *always, up, often, sometimes*… This division was performed because of the persuasive implications that the position of the deictic items have concerning the language used by governments (De Cillia et al., 1999, see section 2). This part of the analysis had to be carried out manually, as well given that the distinction between some time and place adverbs was sometimes bordering the indiscernible, so it was necessary to look at their context.

Regarding time deixis realised through verbal tenses, these instances were also manually compiled through the use of different tags that were both included in the tagset of *TagAnt*, and in *Lancsbox*. To obtain the present tense occurrences, *Lancsbox* offers an option by which, if you type "PRESENT TENSE" in capital letters, the occurrences of verbs inflected for present are displayed. Furthermore, to obtain the past tense occurrences, the correspondent tag was used (_VBD). Finally, to obtain the future verb tenses, the searched was performed by typing in all of the cases in which either *will,* present continuous or *be going to* (alongside their different inflected forms).

These results were also compiled into the *Microsoft Excel* file and were normalized on a base of 100 to guarantee reliable comparability.

See example (1) and (2) for an illustration of how a sample of the corpus was approached during the analysis:

(1) *It* [3rd p. s. pron.] *is* [present tense] *really* [hedging expr.] *important to know that the vaccines have all* […] *met* [past tense] *the necessary safety and quality standards.*

(2) *It* [3rd p. s. pron.] *'s* [present tense] *clear* [hedging expr.] *to me* [1st p. s. pron.]. *It* [3rd p. s. pron.] *'s* [present tense] *very clear* [hedging expr.]. *You* [2nd p. s. pron.] *can* [MODAL ability] *trust the COVID vaccine […]*

RESULTS

Raw results and itemized findings can be found in the aforementioned *Microsoft Excel* file in Appendix 2 and 3. Below results are presented in aggregated form for each targeted linguistic phenomenon, i.e., epistemic modality (section 5.1) and person, place and time deixis (section 5.2).

5.1 Epistemic modality results

Country	**Number of modal verbs (on a normalization base of 100)**			**Hedging items (on a normalization base of 100)**
	Total	Possibility/ Probability	Ability	
USA	1.27	0.952	0.317	3.81
UK	1.144	1.073	0.071	3.5
AUSTRALIA	1.942	0.971	0.971	4.37
CANADA	1.393	1.045	0.348	3.48
IRELAND	2.128	1.773	0.415	3.19
NZ	0	0	0	2.9

Table 1: Epistemic modality items in a normalization base of 100.

Regarding epistemic modality results, in table 1 above, Ireland is the country in which deictic items of possibility and probability were more common, with an amount of 1.773 per 100 words. Finally, deictic items of ability (certain occurrences of the modal verb *can*) were especially frequent in the Australian samples, with a number of 0.971 per 100 words. Similarly, in the case of hedging expressions, Australia is the country in which these hedging expressions appeared the most, adding up to 3.98 per 100 words.

On the other side of the spectrum, New Zealand and the United Kingdom are the countries which show a scarcer use of modal verbs and hedging expressions, with New Zealand directly prescinding the use of these devices. The UK presents a total of 1.144 modal verbs per 100 words, and 3.08 hedging devices per 100 words as well.

Finally, the United States and Canada show a moderate use of these mechanisms, with 1.428 and 3.48 epistemic expressions and 1.393 and 3.16 hedging devices respectively. An example of results with epistemic modality markers can be: *we can all help get there by getting vaccinated.* Another example of this epistemic devices would be *Vaccines are truly the way out of the pandemic,* including the hedging device "truly," *or Their vaccines will help to protect them […]*, containing the epistemic modality expression "will", which is inside the possibility/probability category.

5.2 Deixis results

5.2.1 Person deixis results

Country	**1ST Person pronouns**		**2ND Person pronouns**		**3RD Person pronouns**	
	SING.	PL.	SING.	PL.	SING.	PL.
USA	2.063	5.079	2.54	0	1.746	0.635
UK	2.217	2.861	1.43	1.359	2.002	0.429
AUSTRALIA	0	0.728	2.42	0	1.213	0.849
CANADA	0.348	1.045	0.348	0	1.045	0.348
IRELAND	1.773	0.709	3.191	0	4.610	1.064
NZ	0	2.904	1.659	0	0	0

Table 2: Person deixis items in a normalization base of 100.

Regarding person deixis items (table 2), the country with the most frequent deictic items in the 1st person is clearly the USA, in which the singular and form is more common than in any other sample. Besides, the USA also shows a high percentage regarding plural 1st person forms (in this case, with a total output of 2.063 (singular form) and 5.079 (plural) per 100 words, respectively. While the UK, Canada, New Zealand and Ireland show varied frequency in their use of 1st person pronouns, Australia is the country where this pronoun is mentioned the least.

Regarding 2nd person pronouns, Ireland shows the most frequent output of 2nd person singular deictic items, totalling 3.19 words per 100. In this sense, Ireland is closely followed by the USA and Australia. On the other hand, New Zealand, UK, and

especially Canada use 2nd person singular pronouns the least. However, the UK is the only country that includes deictic items in 2nd person plural, with an average of 1.359 items of this category per 100 words.

Lastly, in terms of the 3rd person deixis, the country with the most occurrences is Ireland (both in terms of singular and plural occurrences, with 4.610 per 100 in the singular third person deixis department, and with 1.064 in the plural 3rd person deixis category). UK, Australia, Canada and the USA make varied use of this deictic form, while it does not appear at all in samples from New Zealand.

An instance in which person deixis is used can be: *We love you! We know we don't say it often enough and sometimes we have our disagreements* […] Here, for instance, there is a repeated usage of the second person pronoun "we", which mainly has an intention of communicating the idea of unity and, subsequently, this use embodies a certain sense of community in order to transmit confidence to the reader, who is the "you" addressed and invited by the speaker. Another example of person deixis could be: *I didn't even feel it to be perfectly honest.*

5.2.2 Place deixis results

Country	**Close to deictic centre (in a base of 100)**	**Far from deictic centre (In a base of 100)**	**Undetermined (In a base of 100)**
USA	0.317	0	0
UK	0.643	0.357	0.715
AUSTRALIA	0.364	0.242	0.242
CANADA	0	0.348	0.348
IRELAND	0.354	0	0
NZ	1.659	0.415	0

Table 3: Place deixis items in a normalization base of 100.

Looking at the results related to place deixis, shown in table 3, the classification has been made concerning their closeness to or remoteness from the deictic centre (*here*). Another category has also been added for those adverbs which do not clearly belong to any of the two previous categories (undetermined). The data show that, in

general, the items closer to the deictic centre are more frequent than those farther from it. The country with the highest results in terms of close-to-the-centre deixis is New Zealand, in which the figure adds up to 1.245 per 100 words, while the country with the most frequent items implying distance from the deictic centre is the UK, with 0.357 per 100 items. However, the UK is also the second country including the most place adverbs. Besides, only Canada and the UK make reference to remoteness from the deictic centre, with Canada even only mentioning those and but not any elements indicating closeness to the deictic centre.

Furthermore, the last subdivision represents the items which do not belong to either of the two previous categories. The general results of this subdivision are somewhat comparable to the first category analysed. The country with the higher rate of this type of occurrences is the UK, amounting to 0.715 per 100 utterances.

One instance of place deixis present in the text would be: *Stay home, get tested,* which includes a place adverb close to deictic centre, i.e., "home". Another example could be *we're gonna keep coming here,* in which another place adverb which is close to the deictic centre appears ("here").

5.2.3 Time deixis results

Country	Close to deictic centre (In a base of 100)		Far from deictic centre (In a base of 100)		Undetermined
	Adverbs	**Verb tenses**	**Adverbs**	**Verb tenses**	
USA	1.111	10.952	0	1.111	0.635
UK	0.357	7.081	0.286	2.503	0.5
AUSTRALIA	0.242	6.432	0.242	0.97	0.485
CANADA	0	4.878	0.697	1.045	0.348
IRELAND	0.354	9.22	0.354	2.837	0.354
NZ	0.415	2.904	0	2.074	0.415

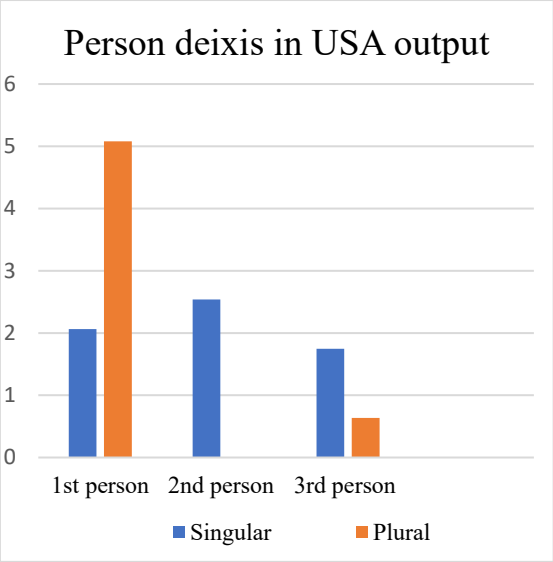
Table 4: Time deixis items in a normalization base of 100.

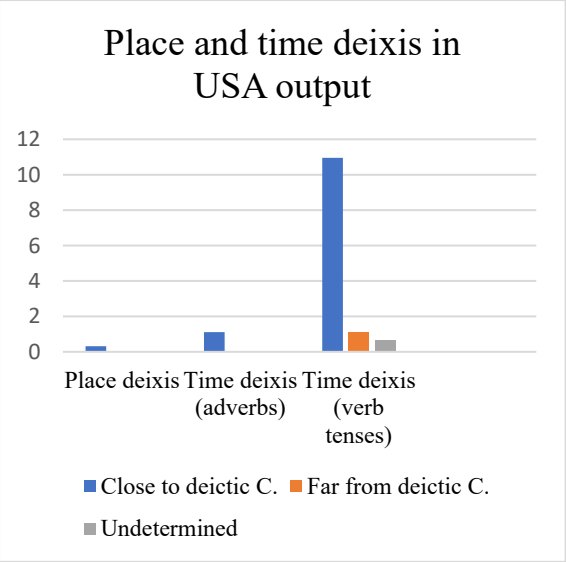
Similar to the previous section, the classification of time adverbs contains the same three categories (close to and far from deictic centre, and undetermined items). However, time deixis results also contain verbal tense, subdivided in past, present and future tenses. As show in table 4, time deixis realized through verbal tenses is much more frequent than through time adverbs. In this case, the USA is the most prolific country in terms of close-to-the-centre deixis realised both though verb tenses and adverbs. Regarding deictic elements indicating distance from the deictic centre, Ireland contains the most occurrences of verb tenses, while, in the case of adverbs, Canada presents the highest output.

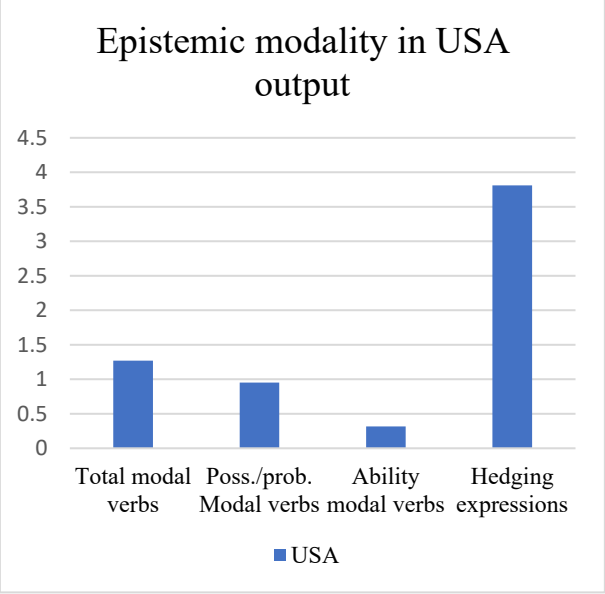
The undetermined category has an overall higher frequency than in the case of place deixis, and the country with more frequent occurrences is, once more, the USA, with a total of 0,635 words per 100. An example of these could be “daily”, or “never”, used in the entirety of the corpus, in expressions such as *in our communities a vaccine has never been so important.* In this instance, we can see how an undetermined time adverb works such as “never”. In this case, “never” is used by the government in question to direct the emphasis towards the present, as well as accentuating the focus on the viewer by using this adverb in this context.

5.3 Results per country

5.3.1 USA



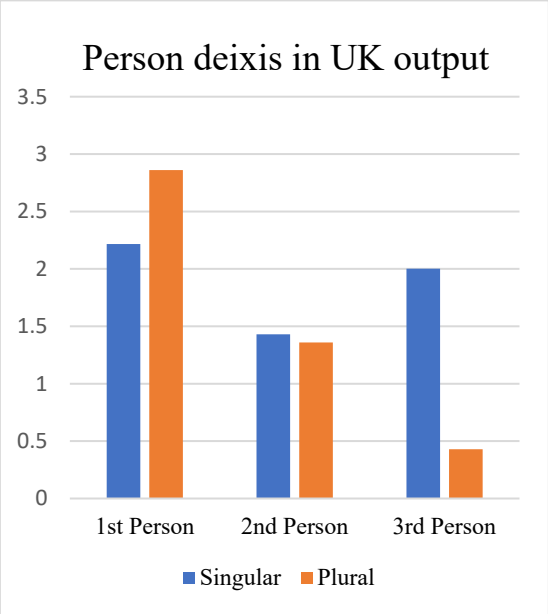


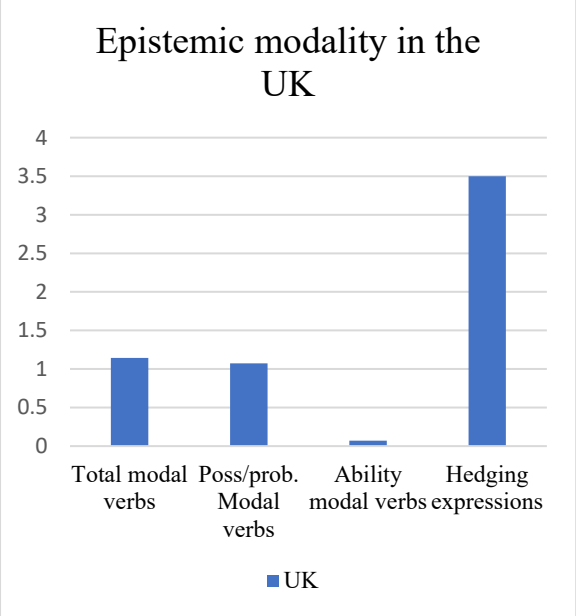


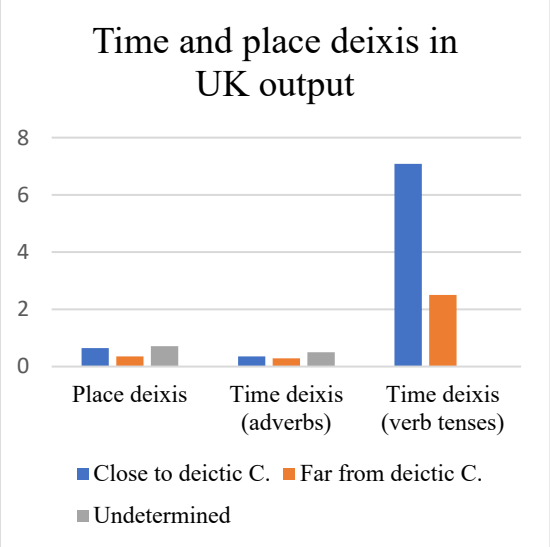
The graphs above show that, in the category of person deixis, there is a very high number of occurrences in the first person plural (as well as in the first person category in general). In the category of time and place deixis, we can also see that a very high output of verbal tenses close to the deictic centre was obtained. Finally, when looking at

the epistemic modality results, and as mentioned before, the hedging expressions and devices stand out over the modal verb usage.

5.3.2 UK



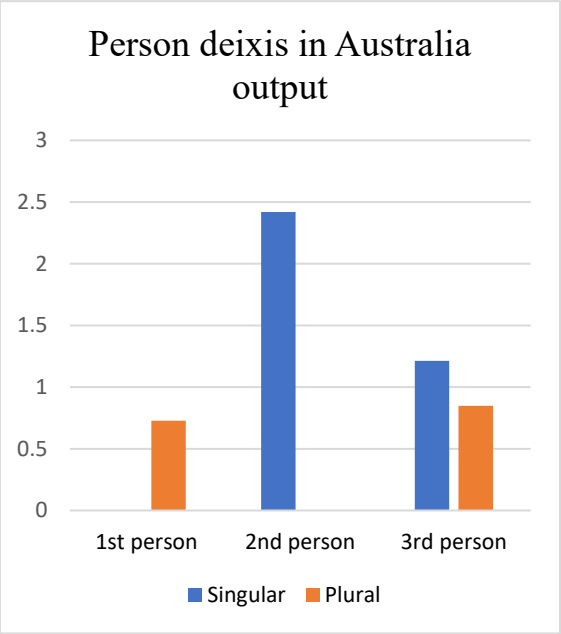


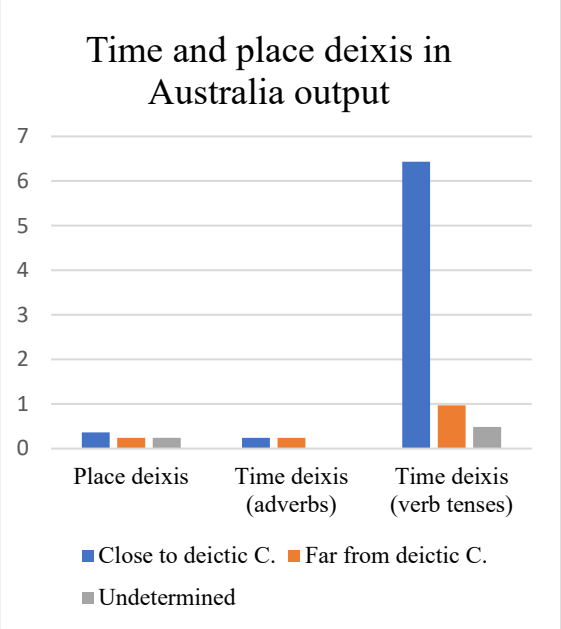


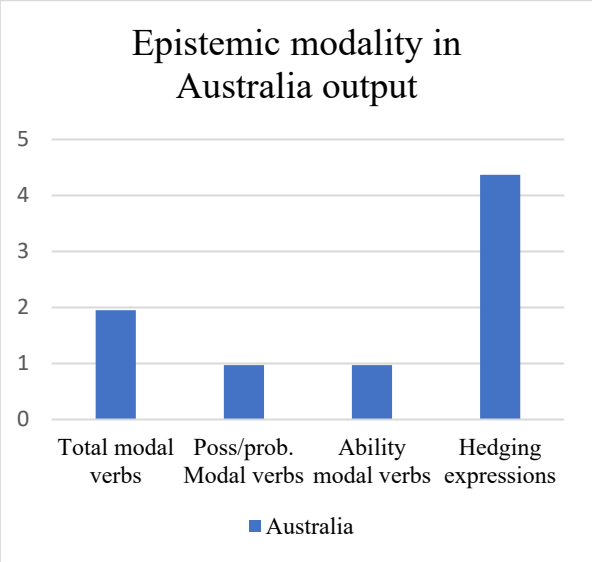
In the person deixis table we can see that, just like in the American results, there seems to be a high proficiency regarding first person deixis and terms. In the case of the time deixis table, the verb tenses close to deictic centre again seems to be the leading category in this department. Finally, when looking at the epistemic modality graph, we

can see apparently a higher number of modal verbs used than in the American output, although the leading category remains being hedging expressions.

5.3.3 Australia



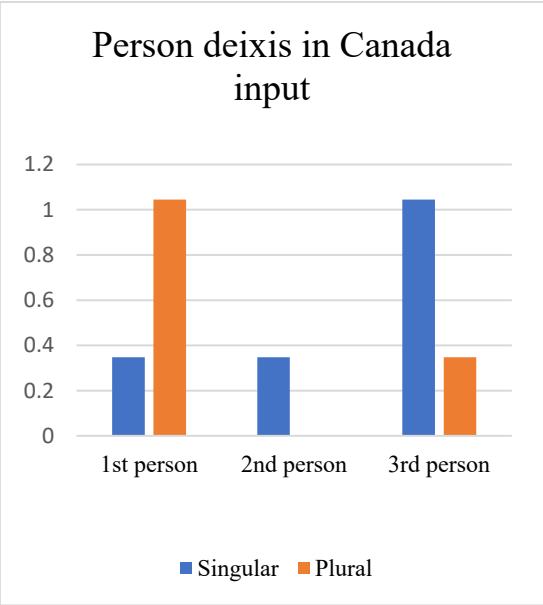


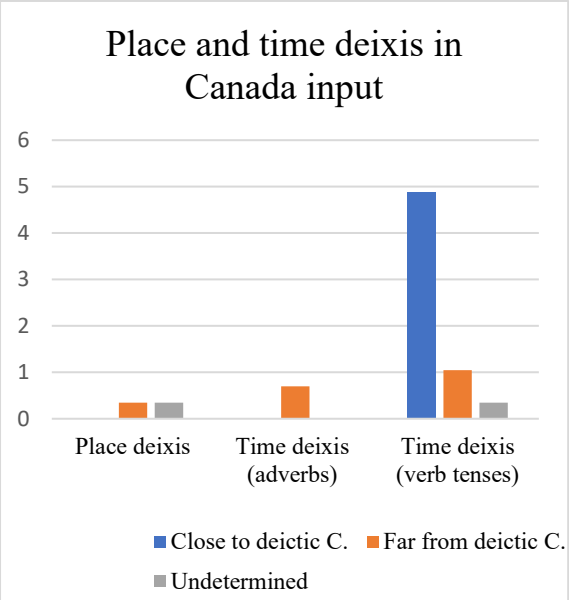


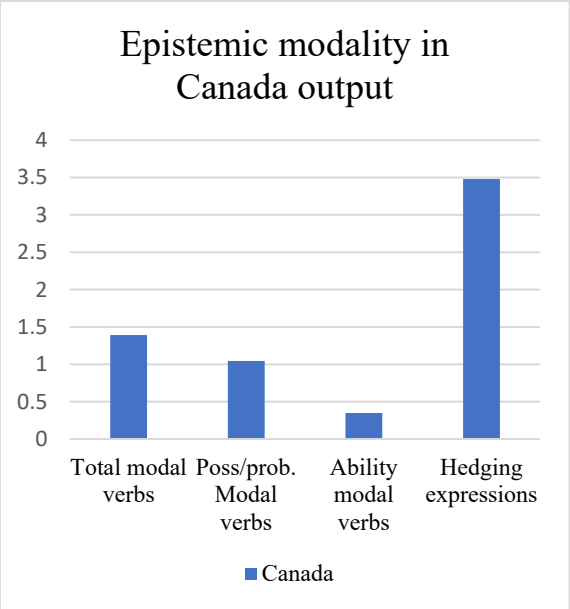
The person deixis graph that shows Australian data depicts that there is a higher usage of second person singular pronouns than in the rest of samples obtained from other countries. As to the time and place deixis categories, we can yet again see that the verb tenses closer to deictic centre seem to be the most dominant category in all the

samples analysed. Finally, the epistemic modality category contains a number of modal verbs similar to the UK output, and an above average number of hedging expressions.

5.3.4 Canada



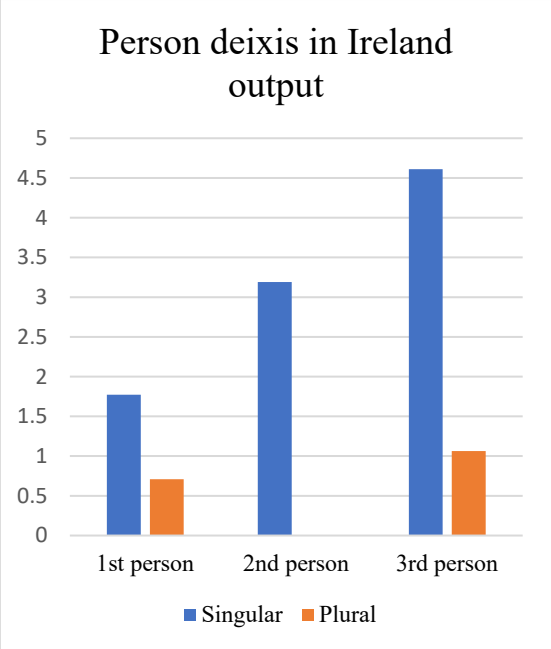


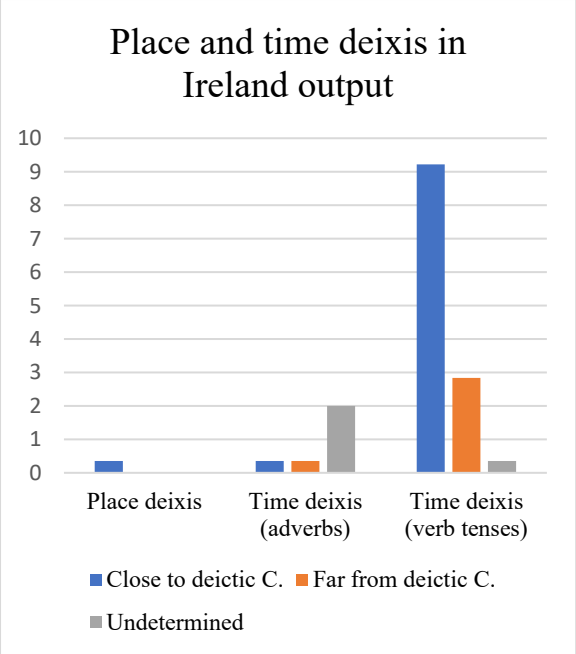


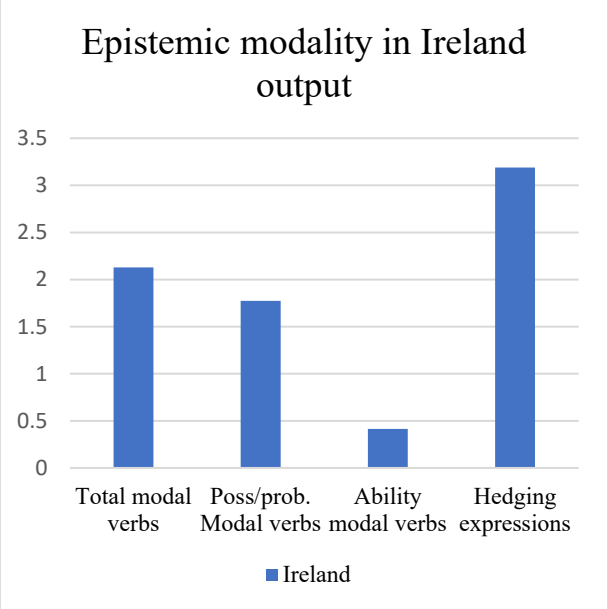
Looking at the Canadian results in general, the thing which stands out the most regarding its general data is the high number of occurrences in the third person singular

department of person deixis, as well as an also high number of first person plural percentage. The rest of the results seem to be average when compared to other outputs.

5.3.5 Ireland

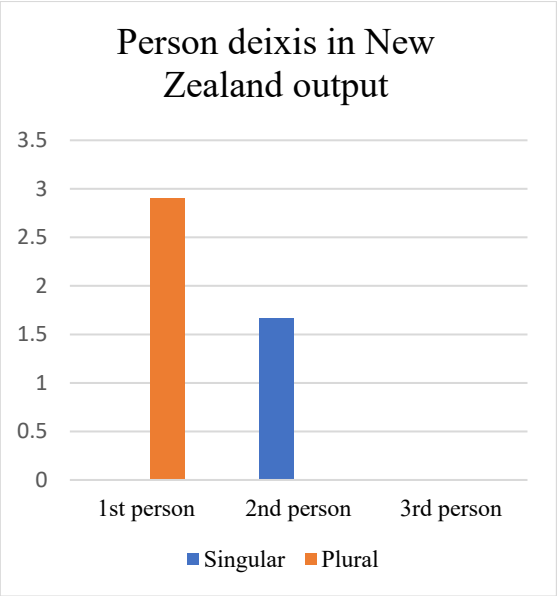


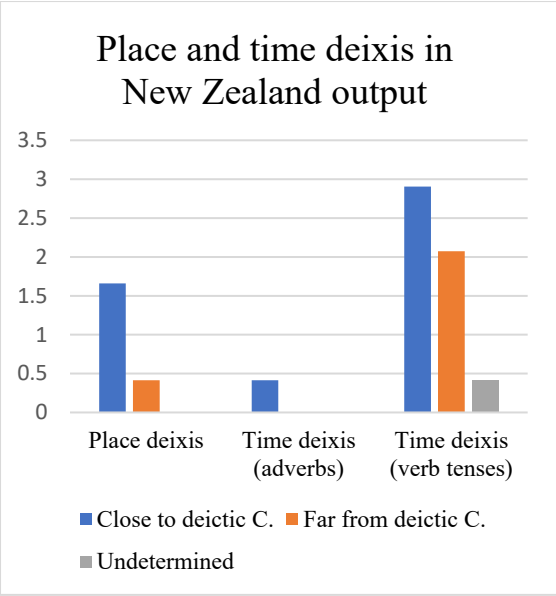


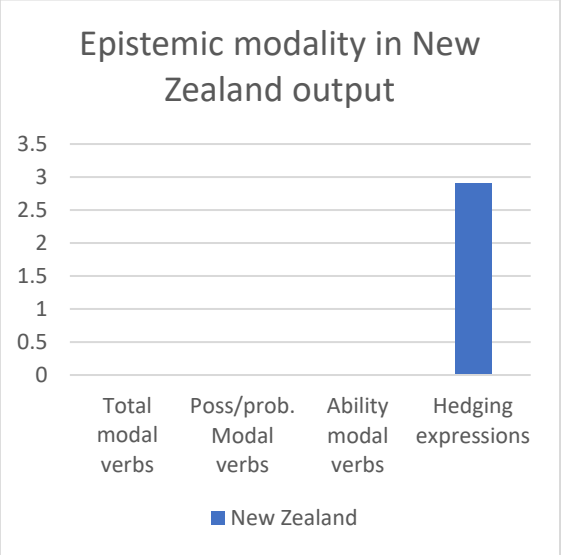


The Irish output really stands out for the exceptionally high number of third person singular pronouns, as well as having a high percentage of second person singular pronouns. We can also see there are more verb tenses both closer and father from deictic centre than in other results. Regarding epistemic modality, modal verbs are much more common in the Irish output that they are in the rest.

5.3.6 New Zealand

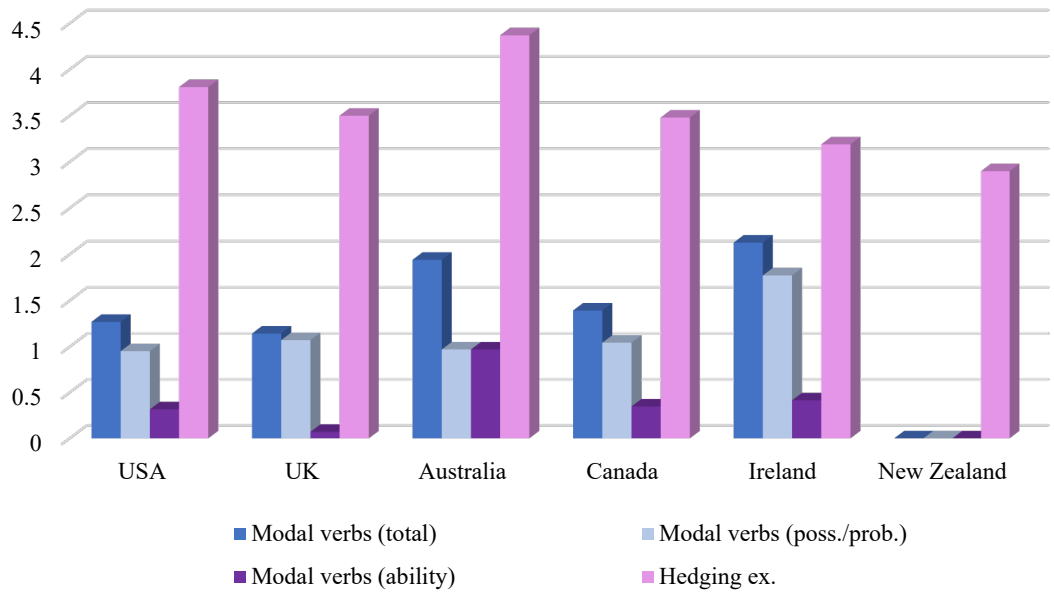






The New Zealand output shows few remarkable statistics, such as an above-average number of first person plural percentage of occurrences, and a below average percentage of verb tenses, both close and far from the deictic centre, when compared to other Anglo-Saxon countries' output.

5.4 Results summary



Graph 2. Epistemic modality results per country.

By looking at graph 2, we can observe how hedging expressions and devices are definitely much more frequent than modal verbs in the obtained results of the research. Furthermore, the most common modal verbs found were usually part of the possibility/probability subsection. Regarding countries, it seems that both Australia and Ireland have the highest output regarding modal verbs. As to hedging expressions, the Australian and American numbers are slightly above the rest of the countries analysed. The least used epistemic mechanism are, by a considerable margin, the modal verbs of ability. For instance, in the New Zealand output, we find the example *but guess what? We've got plans too,* where there is a more informal language when compared to other countries' outputs (hence modal verbs are inexistent in the New Zealand results), such as the Irish: *You don´t need to register in advance.*

DISCUSSION

After retrieving, quantifying, and classifying all data from the corpus as detailed above, figures related to the persuasive strategies employed in national vaccination campaign adverts were compared to national vaccination statistics. In this section, the nature of the diverse approaches to persuasion undertaken by each country will be examined, as well as compared to vaccination ratios. The percentages of vaccinations provided below will serve the purpose of testing a presumable connection between the two (vaccination data and amount/type of persuasive strategies).

Country	Total vaccinations (one dose)	Percentage
USA[1]	257,846,006	78%
UK[2]	53,398,518	77.88%
AUSTRALIA[3]	20,054,894	76.92%
CANADA[4]	32,454,368	84.86%
IRELAND[5]	3,036,695	60.2%
NZ[6]	4,290,027	87.6%
AVERAGE	61,846,751	77.57%

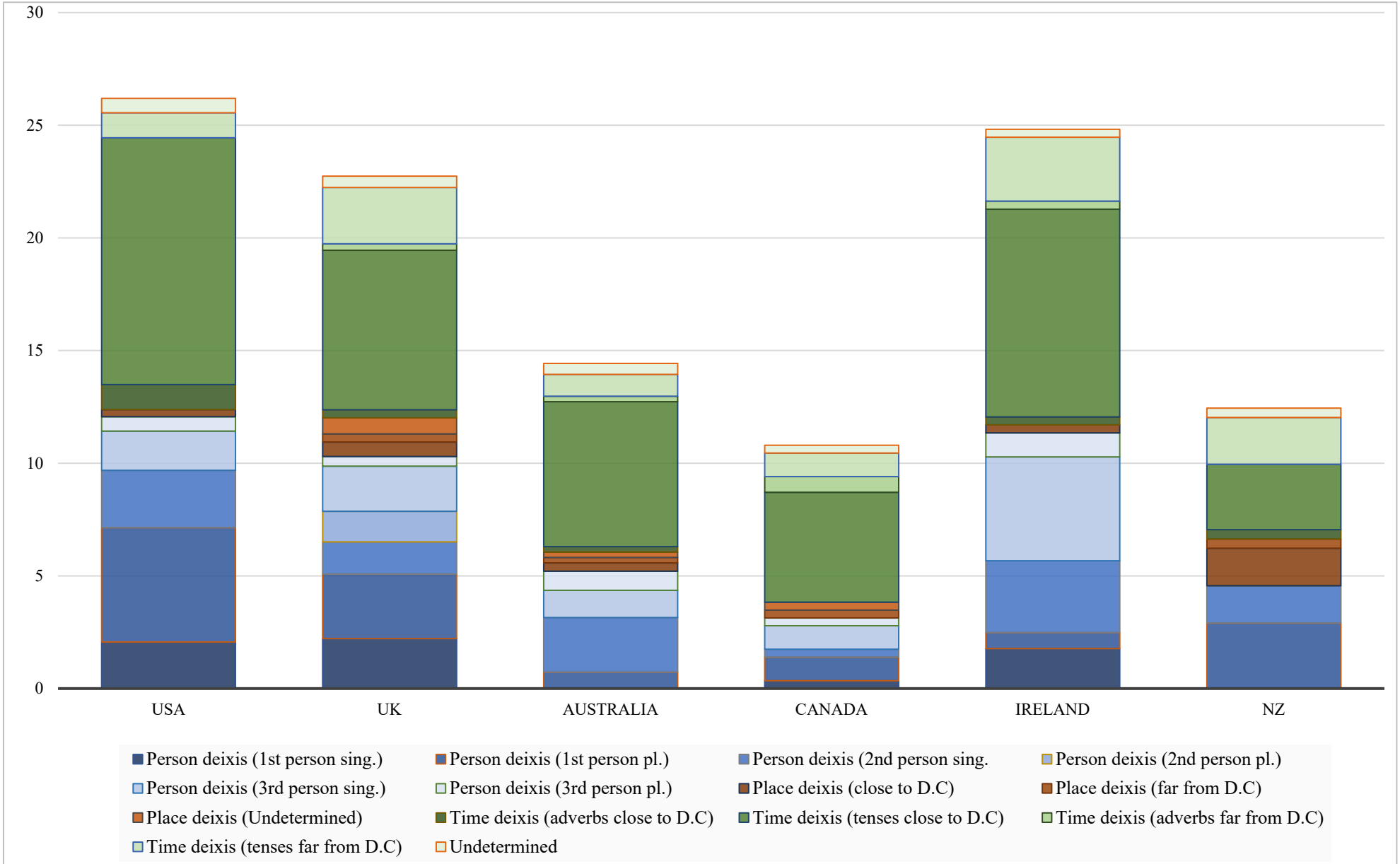
Table 5: Vaccination rates in Anglo-Saxon countries.

After consulting the vaccination rates of each Anglo-Saxon country under study (see table 5 above), official statistics show New Zealand is the country with the highest amount of population having received at least one dose of the Covid-19 vaccine (87.60%) followed by Canada (84.86%), USA (78%), UK (77.88%), Australia (76.92%) and Ireland (60.2%).

These data will now be compared to the results regarding the use of epistemic modality and deixis made by each country in their vaccination campaigns (graph 3

[1] USAFacts, 2022, US Coronavirus vaccine tracker section.
[2] U.K government, 2022, Vaccinations in United Kingdom section.
[3] Australian health department, 2022, Covid-19 vaccination -vaccination data- section.
[4] Public health agency of Canada, 2022, COVID-19 vaccinations in Canada section.
[5] Government of Ireland, 2022, Vaccinations section
[6] Ministry of Health of New Zealand, 2022, COVID-19: Vaccine data section.

below) to shed light on a possible relationship between the linguistic strategies employed to achieve persuasion and the number of people who were administered the Covid-19 vaccine.



Graph 3. Deictic elements results per country.

6.1 USA

In the case of the USA, as shown in the graph 3 above, the government seems to be one of the countries which includes a higher number of persuasive devices in their discourse. Therefore, we can presumably consider their approach to Covid-19 vaccination campaigning as persuasively active through language. When contrasting our results with the ones obtained in vaccination data, as it can be seen in table 5 above, the USA has average numbers of Covid-19 vaccinations (A 78% when the average of the six countries under study average at 77.57%). This might indicate a certain success in the vaccination campaign, since the majority of the people in the country are vaccinated, but, at the same time, the persuasive devices under study apparently did not have a major impact on the vaccination rates.

Table 5 and graph 3 above show that the USA's epistemic modality devices used in their advertisement is consistently average and do not lead any of the highlighted categories. However, when looking at the deictic strategies and expressions that USA's advertisements present, we find that this country leads some categories with a wide margin (such as in time deixis, realized through both verb tenses and adverbs close to deictic centre, as well as in first person deixis concerning plural forms). This shows that the USA, being one of the countries which used a higher quantity of persuasive strategies in their scripts, was not particularly effective in their use.

All things considered, the persuasive devices used in USA's Covid-19 advertisements (especially first person and place deixis) appear to have been a mild factor in the vaccination numbers; however, at a first glance, we cannot affirm that this is the most relevant justification for the USA's rates, due to the average rates of Covid-19 vaccinations in comparison to the other Anglo-Saxon countries studied.

6.2 The UK

Regarding the UK's persuasive strategy, we can observe that their approach is one of the most prolific in persuasive linguistic devices of all countries under study. All in all, the UK's governmental adverts contain an average number of total occurrences of these devices, not having as much as USA or Ireland (proportion-wise) but totalling more devices than other countries such as New Zealand. In this sense, the Covid-19

vaccination numbers of the United Kingdom are similar to the ones presented by the USA, in an almost identical percentage. This fact seemingly allows us to assume that the success of their vaccination campaigns should be similar altogether.

By looking at the graphs 2 and 3 above, the output apparently shows that the UK has a below-average number of epistemic modality devices in comparison to other countries such as the USA, Ireland or Australia. However, we can also observe that, concerning deixis, their output increases. The UK leads several deictic categories: second person deixis in the plural form, and place deixis indicating distance from the deictic centre). It remains lower in the ranking if we consider other devices, such as third person deixis in plural form.

These findings may suggest that, owing to the rather similar number of persuasive devices included in each's governmental advertisements, their influence in the general public has been noticeable, but not superlative, nor exclusively attributable to linguistic strategies, in a similar fashion as the one identified in the USA.

6.3 Australia

The Australian output, when compared to the two nations mentioned, seem to point out that Australia is another country, alongside the USA and Ireland, which has a number of persuasive elements' occurrences higher than the average.

This is especially noticeable in the epistemic modality results, in which it seems that the Australian use of modal verbs and hedging devices is overall the highest of the six countries analysed. Besides, Australia is at the top in numerous categories, including the highest percentage of modal verbs of possibility, probability and ability, as well as the highest percentage of hedging expressions. When taking a look at the deictic results, the Australian output seems to be more in line with the average, and the percentages are more modest than in results from the USA, the UK and Ireland.

Regarding Australia's vaccination rates, we could say they are in a point similar to both the UK and the USA, with the percentage being slightly lower. In this context, the vaccination rates could be showing a relative success in the advertisement campaign, similar to the cases of the UK and the USA above. Nevertheless, once again,

results seem to prove that the linguistic devices used in national TV vaccination campaign adverts are not a conclusive or determinant factor for citizens' decision to get vaccinated.

6.4 Canada

The total Canadian number of persuasive linguistic strategies, as shown in tables 1, 2 and 3 is below average when compared to the results of the other nations. Canada could be considered the second nation with the least persuasive devices in their messages, only behind New Zealand.

Regarding the epistemic modality devices used in Canadian Covid-19 advertisement, we could say that this country employs an average number of strategies in almost all of the categories when compared to other countries analysed. As to the deictic expressions, the rate at which these appear is lower than in most of the other countries under study, even presenting one of the lowest rates in terms of deixis, just behind New Zealand.

We could assume, by looking at the vaccination rates Canada, that the correlation between the adverts' persuasive devices and the number of vaccinated people is very weak, if not even inverse. This is so because Canadian vaccination rate is one of the highest amongst the Anglo-Saxon countries mentioned, while their linguistic persuasive strategies are not the most prolific in any of the aspects analysed.

6.5 Ireland

The case of Ireland is probably the most peculiar out of all the countries presented, which could confirm the indirect relationship between linguistic persuasive devices and vaccination rates hinted at above. The data obtained shows a very high number of epistemic and deictic items in the Irish adverts' discourse (up to par with USA's output) and presents a very important number of persuasive categories regarding total percentage, such as leading the epistemic modality content, or having a high percentage in time deixis content. Similarly, Irish advertisements stand out for having

the highest percentage of occurrences of all types of modal verbs, and the percentage of possibility/probability modal verbs. Likewise, as to the deixis results, we can observe that Ireland also has one of the highest proportions out of all the countries studied, leading several subsections (like that of person deixis occurrences of both second and third person singular, as well as the time deixis through verb tenses close to the deictic centre).

However, when considering the total Covid-19 vaccination rates from Ireland, it seems that there is not a strong correlation between the high number of linguistic persuasive devices included by the Irish government in their vaccination campaign and the actual number of vaccinated citizens, since the Irish vaccination rate is the lowest of the six countries under study. Adding all of this up, we could say that Ireland is the country in which the correlation between the vaccination rates and the amount of persuasive discourse found in the governmental adverts is the weakest.

6.6 New Zealand

Finally, as shown in the results above, New Zealand presents the least persuasive linguistic devices, as most of the categories analysed in this work were not even used in their advertisements.

The aspect which makes New Zealand's adverts and their discourse different from the others is that the language was far more informal and colloquial than in all the other countries' samples—an observation possible thanks to the manual revision of concordance lines of targeted items, which has nonetheless not been quantified or empirically tested yet. When looking at both the epistemic modality and the deixis results, the New Zealand output does not have as high of a percentage as the other Anglo-Saxon countries, and is often found in the last position in comparison. It also seems rather odd that the vaccination rates of New Zealand are the highest, despite the low number of persuasive devices used by this country's government.

We can conclude, therefore, that, after comparing all countries, data from New Zealand seems to confirm that the correlation between the number of strategies and the vaccination rates is again weaker than in other countries investigated, being an inverse

relationship in which the pattern follows the rationale of the lower the number of persuasive devices included in the ads, the higher the number of vaccinated citizens. Apparently, the informal language in this case, alongside the persuasive strategies, and possibly other factors out of the scope of this study, have had more influence in the population for this country to be the one with the highest Covid-19 vaccination percentage.

CONCLUSION

This work has attempted to identify a pattern in the persuasive strategies built through language and used by Anglo-Saxon governments to promote their Covid-19 vaccination campaigns. To do so, a corpus of a total of 3662 words was compiled and analysed in terms of epistemic modality (modal verbs and hedging expressions), deixis (both person, time and place deixis). After analysing the corpus, results showed that the prominence of person deixis, as well as verb tenses within time deixis, were some of the most remarkable findings of the research.

However, this study has not been able to prove a direct relationship between the number of persuasive devices linguistically realized in national adverts and the number of citizens who decided to get the vaccine. In contrast, a clear pattern seems to have been identified: the fewer of these persuasive devices included, the higher the rate of vaccinated population. This is a rather surprising finding for which an explanation has not been found in the persuasive strategies employed by Anglo-Saxon governments.

Nevertheless, this lack of a clear answer to our initial research question is likely rooted in the restricted scope of this study due to material constraints. This work has focused on a very specific set of linguistic devices used to persuade an audience. However, further studies should consider the wide array of sources of public behaviour which might have influence when taking medical decisions such as vaccinations: personal experience, social environment, health/science literacy, information media exposition (mainstream, partisan, online), as well as other finer-grained factors which

may have an influence in attaining effective persuasion, such as the non-linguistic persuasive devices used in adverts which were out of the scope of this study.

In any case, this work shows that epistemic modality and deixis, used with a persuasive intent by governments, are not effective strategies which will guarantee a directly related amount of people being persuaded. In essence, this work has attempted to contribute to the study of public discourse and could be seen as proof that governmental influence is not as strong as initially presupposed, or that its influence is rooted simply in its authoritative status rather than in any specific persuasive device used, linguistic or not.

REFERENCES

Australian department of health. (2022). *Covid-19 vaccination -vaccination data-*. COVID-19 vaccination – vaccination data – 23 May 2022 | Australian Government Department of Health

Beard, A. (2000). *The language of politics* (Vol. 121). London: Routledge.

Benoit, W. L., McHale, J. P., Hansen, G. J., Pier, P. M., & McGuire, J. P. (2003). *Campaign 2000: A functional analysis of presidential campaign discourse*. Rowman & Littlefield.

Chilton, P. (2004). *Analysing political discourse: Theory and practice*. Routledge.

Coates, J. (1987). Epistemic modality and spoken discourse. *Transactions of the Philological society*, *85*(1), 110-131.

Durmaz, N., & Hengirmen, E. (2022). The dramatic increase in anti-vaccine discourses during the COVID-19 pandemic: a social network analysis of Twitter. *Human vaccines & immunotherapeutics*, *18*(1), 2025008.

Fairclough, N. (1992). Discourse and text: Linguistic and intertextual analysis within discourse analysis. *Discourse & society*, *3*(2), 193-217.

Filardo-Llamas, L. (2021). From the War on Covid-19 to Political Wars: Metaphor as a Mechanism of Polarization in the Early Stages of the 2020 Pandemic. In *Discursive Approaches to Sociopolitical Polarization and Conflict* (pp. 192-212). Routledge.

Filardo-Llamas, L., & Boyd, M. S. (2017). Critical discourse analysis and politics 1. In *The Routledge handbook of critical discourse studies* (pp. 312-327). Routledge.

Government of Ireland. (2022). *Vaccinations.* https://covid19ireland-geohive.hub.arcgis.com/pages/vaccinations.

Government of the U.K. (2022). *Vaccinations in the UK.* https://coronavirus.data.gov.uk/details/vaccinations?areaType=overview&areaName=United%20Kingdom.

Halliday, M. A. K., & Hasan, R. (2014). *Cohesion in english*. Routledge. (Halliday Michael, A. K., & Ruqaiya, H. (1976). Cohesion in English.)

Hyland, K. (2005). *Metadiscourse: Exploring Interaction in Writing*. A&C Black.

Jamieson, K. H., & Adasiewicz, C. (2000). What can voters learn from election debates?. In *Televised election debates* (pp. 25-42). Palgrave Macmillan, London.

Jeffries, L. (2009). *Critical stylistics: The power of English*. Macmillan International Higher Education.

Kaid, L. L., & Johnston, A. (1991). Negative versus Positive Television Advertising in US Presidential Campaigns, 1960-1988. *Journal of communication*, *41*(3), 53-64.

Levinson, S. C., Levinson, S. C., & Levinson, S. (1983). *Pragmatics*. Cambridge university press.

Machin, D., & Mayr, A. (2012). *How to Do Critical Discourse Analysis: A Multimodal Introduction*. SAGE.

Mauranen, A. (1993). Contrastive ESP rhetoric: Metatext in Finnish-English economics texts. *English for specific Purposes*, *12*(1), 3-22.

Ministry of health of New Zealand. (2022). *Covid-19: Vaccine Data*. https://www.health.govt.nz/covid-19-novel-coronavirus/covid-19-data-and-statistics/covid-19-vaccine-data#total-vaccinations.

Motschenbacher, H. (2018). Corpus linguistics in language and sexuality studies: Taking stock and looking ahead. *Journal of Language and Sexuality*, *7*(2), 145-174.

Public Health Agency of Canada. (2022). *Demographics: Covid-19 Vaccination Coverage in Canada.* https://health-infobase.canada.ca/covid-19/vaccination-coverage/.

Renkema, J. (2004). Introduction to discourse studies.

Rivas-de-Roca, R. (2021). A study of political and media discourses in the 2020 Galician regional elections. *Doxa Comunicacion*, 121-135.

Shabo, M. (2010). *Rhetoric, logic, and argumentation: A guide for student writers*. Prestwick House Inc.

Sinclair, J., & Sinclair, L. (1991). *Corpus, concordance, collocation*. Oxford University Press, USA.

USAFacts. (2022). *US Coronavirus vaccine tracker.* https://usafacts.org/visualizations/covid-vaccine-tracker-states/.

Van Dijk, T. A. (2009). *Society and discourse: How social contexts influence text and talk*. Cambridge University Press.

Virtanen, T., & Halmari, H. (2005). Emerging perspectives. *Persuasion across genres: A linguistic approach*, 1.

West, D. M. (1997). *Air wars: Television advertising in election campaigns, 1952-1996*. Cq Press.

Whitham, B. (2021). The cultural politics of crisis in the UK. In *Power, Media and the Covid-19 Pandemic* (pp. 71-85). Routledge.

Wodak, R., & Meyer, M. (2009). Critical discourse analysis: History, agenda, theory and methodology. *Methods of critical discourse analysis*, *2*, 1-33.

Wodak, R., De Cillia, R., & Reisigl, M. (1999). The discursive construction of national identities. *Discourse and Society*, *10*(2), 149-173.

APPENDIX 1

NUMBER	COUNTRY	MONTH	YEAR	WORDS	SOURCE (LINK)
1	USA	3	2022	155	Oath: COVID-19 Vaccines - :30 - YouTube
2	USA	3	2022	145	https://www.youtube.com/watch?v=0gCnc2Ufqu8
3	USA	1	2022	64	Stay in the Game - :30 - YouTube
4	USA	5	2021	59	Jack of All Trades - :30 - YouTube
5	USA	1	2022	76	The Extra Mile :30
6	USA	3	2022	37	It's a Family Thing - :15 - YouTube
7	USA	3	2022	33	It Takes Teamwork - YouTube
8	USA	1	2022	61	We All Need a Boost - :30 - YouTube
1	UK	2	2021	201	Elton John and Michael Caine star in NHS Covid vaccine ad - YouTube
2	UK	5	2021	85	COVID Vaccine TV ad - YouTube
3	UK	4	2021	174	Capturing the COVID-19 vaccination rollout | NHS - YouTube
4	UK	3	2021	421	A letter to loved ones about the COVID-19 vaccine - Sir Lenny Henry | NHS - YouTube
5	UK	8	2021	517	"My advice to anyone is to get the vaccine" - Young COVID patients share their experiences | NHS - YouTube
1	CANADA	5	2021	48	COVID-19 vaccines: We can all help by getting vaccinated - YouTube
2	CANADA	8	2021	52	COVID-19 vaccines: It's time for kids to make memories again - YouTube
3	CANADA	3	2021	73	How do I know COVID-19 vaccines are safe without long-term data? - YouTube
4	CANADA	6	2021	61	How was it possible to develop safe COVID-19 vaccines so quickly? - YouTube
5	CANADA	6	2021	53	How do we know the COVID-19 vaccines are safe? - YouTube
1	AUSTRALIA	8	2021	53	COVID-19 vaccination – Video – COVID-19 vaccines are available now – 30 second - YouTube
2	AUSTRALIA	7	2021	71	https://www.youtube.com/watch?v=hY_1EsGxjW0
3	AUSTRALIA	7	2021	49	COVID-19 vaccination – Video – Arm yourself against COVID-19 (30 seconds – Female) | Australian Government Department of Health
4	AUSTRALIA	6	2021	136	COVID-19 Vaccines: Protecting Australians' health and way of life - YouTube
5	AUSTRALIA	3	2021	230	Professor James Ward – How do COVID-19 vaccines work? - YouTube
6	AUSTRALIA	6	2021	285	COVID-19 Vaccines: Reliable health advice - YouTube
1	NEW ZEALAND	10	2021	132	Two shots for summer - YouTube
2	NEW ZEALAND	5	2021	109	Ka kite, COVID. - YouTube
1	IRELAND	2	2021	93	COVID-19 vaccines - YouTube
2	IRELAND	3	2022	74	COVID-19 vaccine for children aged 5 and older - YouTube
3	IRELAND	8	2021	115	COVID-19 vaccines #ForUsAll - YouTube
	TOTAL			3662	

Table 6: Corpus 0

APPENDIX 2

NUMBER	COUNTRY	TOTAL MD	CAN	WOULD	COULD	MAY	MIGHT	WILL/WON'T
1	USA							
2	USA	3	2	1				
3	USA	1						1
4	USA	1	1					
5	USA							
6	USA	1						1
7	USA	2	1					1
8	USA							
1	U.K	3	1					2
2	U.K	1						1
3	U.K							
4	U.K	3	1					2
5	U.K	9	2	3	2	1	1	
1	AUSTRALIA	1	1					
2	AUSTRALIA							
3	AUSTRALIA	1	1					
4	AUSTRALIA	3	1			1		1
5	AUSTRALIA	8	4					4
6	AUSTRALIA	3	3					
1	CANADA	3	3					
2	CANADA	1	1					
3	CANADA							
4	CANADA							
5	CANADA							
1	IRELAND	3	2					1
2	IRELAND	2	1					1
3	IRELAND	1						1
1	NZ							
2	NZ							
	TOTAL	50	25	4	2	2	1	16

Table 7: Epistemic modality data (Modal verbs)

MODAL VERBS OF PROBABILITY (WILL/WOULD)			MODAL VERBS OF ABILITY (CAN)		
USA	4	**0.635**	USA	2	**0.317**
U.K	8	**0.572**	U.K	1	**0.071**
AUSTRALIA	5	**0.606**	AUSTRALIA	8	**0.971**
CANADA	0	**0**	CANADA	1	**0.348**
IRELAND	3	**1.06**	IRELAND	1	**0.415**
NZ	0	**0**	NZ		

Tables 8 and 9: Total data of the different modal verb categories (part 1)

MODAL VERBS OF POSSIBILITY (COULD, MIGHT, MAY, CAN)		
USA	2	**0.317**
U.K	7	**0.5**
AUSTRALIA	3	**0.364**
CANADA	3	**1.045**
IRELAND	2	**0.709**
NZ	0	**0**

Table 10: Total data of the different modal verb categories (part 2)

NUMBER	COUNTRY	HEDGING EX.	Agree	Expected	Important	Preferably	Shocked	Understandably	Unfortunately	Actually	Always	Clear	Demonstrated	Find	In fact	Know	Never	No doubt	Obviously	Really	Think	Truly	About	Almost	Around	Doubt	Feel	Guess	Likely	Often	Possible	Relatively	Sometimes	Tend to	Assess	Do not	Develop	Ensure	Find2	Go	Key	Let's	Need to	Remove	See
1	USA	6			1											2								1																					2
2	USA	9	1		1							2				3																							1						1
3	USA	0																																											
4	USA	3			1											1																1												
5	USA	3									1																											2						
6	USA	1															1																												
7	USA	2			1																																	1						
8	USA	0																																										
1	U.K	12			1									1		4				1																	1	1		3				
2	U.K	1									1																																		
3	U.K	2																						1												1									
4	U.K	12				1										4				1			1							1										1	1		2
5	U.K	22					1			1	1			1					1	3	3	1	1			2		2					1					1	3					
1	AUSTRA	1																																					1					
2	AUS	2												1																								1						
3	AUS	3												1																								1	1					
4	AUS	6			2						1						1						1														1							
5	AUS	8												1		1							1		1			1									1				1		1
6	AUS	16						1	1		1		1		1								3								1	1		1	3		1					1	
1	CA	0																																										
2	CA	1																						1																					

3	CA	5												1		1							1		1													1						
4	CA	2																													1					1								
5	CA	2		1												1																												
1	IRE	2																					1																			1		
2	IRE	1																					1																					
3	IRE	6																					1				3													1				1
1	NZ	1																																							1			
2	NZ	6														1		1								1		1																2
	TOTAL	135	1	1	7	1	1	1	1	1	5	2	1	6	1	18	2	1	1	5	3	1	11	1	4	1	5	1	3	1	1	1	2	1	1	3	2	2	6	11	1	4	3	1	9

Table 11: Epistemic modality data (hedging expressions)

APPENDIX 3

NUMBER	COUNTRY	PERSON DEIXIS	I	WE	YOU (sing)	HE	SHE	IT	THEY	ME	HIM	HER	US	THEM	YOU (pl)
1	USA	16	1	9	4					1			1		
2	USA	22	7	5	4			5		1					
3	USA	7		4	2			1							
4	USA	4		4											
5	USA	9			3			2	2						2
6	USA	6	2	2				1		1					
7	USA	5		1	2			1						1	
8	USA	7		3	1			1						2	
1	U.K	15	2	2	6	1		3		1					
2	U.K	5		1	2									2	
3	U.K	16	3		1			10						2	
4	U.K	55		26	19	1		4	1					4	
5	U.K	53	23	2	11			9	3	2				1	2
1	AUSTRALIA														
2	AUSTRALIA	4		2				2							
3	AUSTRALIA	2			2										
4	AUSTRALIA	7		2	3			2							
5	AUSTRALIA	13		1	7			5							
6	AUSTRALIA	17		1	8			1	6						1
1	CANADA	3		1				1						1	
2	CANADA	2						1							1
3	CANADA	2	1		1										
4	CANADA	1						1							
5	CANADA	1		1											
1	IRELAND	8		1	5			1	1						
2	IRELAND	4		1	2										1
3	IRELAND	20	5		2			12	1						
1	NZ	1						1							
2	NZ	11		7	4										
	TOTAL	316	44	76	89	2		64	14	6			14	7	

Table 12: Person deixis data

FIRST PERSON DEIXIS			SECOND PERSON DEIXIS			THIRD PERSON DEIXIS		
USA	45	**7.14**	USA	16	**2.54**	USA	15	**2.381**
U.K	71	**5.078**	U.K	39	**2.789**	U.K	34	**2.432**
AUSTRALIA	8	**0.97**	AUSTRALIA	20	**2.427**	AUSTRALIA	17	**2.063**
CANADA	4	**1.39**	CANADA	1	**0.348**	CANADA	4	**1.39**
IRELAND	7	**2.48**	IRELAND	9	**3.191**	IRELAND	16	**5.673**
NZ	7	**1.245**	NZ	4	**1.245**	NZ	0	**0**

Table 13: Person deixis classification regarding the grammatical person

FIRST PERSON DEIXIS	SING.		PL.		SECOND PERSON DEIXIS	SING.		PL.	
USA	13	**2.063**	32	**5.079**	USA	16	**2.54**	0	**0**
U.K	31	**2.217**	40	**2.861**	U.K	20	**1.43**	19	**1.359**
AUSTRALIA	0	**0**	6	**0.728**	AUSTRALIA	20	**2.42**	0	**0**
CANADA	1	**0.348**	3	**1.045**	CANADA	1	**0.348**	0	**0**
IRELAND	5	**1.773**	2	**0.709**	IRELAND	9	**3.191**	0	**0**
NZ	0	**0**	7	**2.904**	NZ	4	**1.659**	0	**0**

Table 14: Person deixis classification regarding singular or plural form

NUMBER	COUNTRY	PLACE ADVERBS	HOME	THERE	TOGETHER	THROUGH	BACK	HERE	CLOSER	FAR	APART	BEHIND	AROUND	ANYWHERE	DOWN	UPRIGHT	ONLINE	UP	FORWARD	NOWHERE
1	USA																			
2	USA	1						1												
3	USA																			
4	USA																			
5	USA																			
6	USA																			
7	USA	1			1															
8	USA																			
1	U.K	4		3		1														
2	U.K	5			1		1		3											
3	U.K		3						1	1								1		
4	U.K	6			2		1	1			1	1								
5	U.K	6					1								1	1	1	1		1
1	AUSTRALIA	1	1																	
2	AUSTRALIA																			
3	AUSTRALIA	1																1		
4	AUSTRALIA																			
5	AUSTRALIA	2											1	1						
6	AUSTRALIA	3						1									2			
1	CANADA	1		1																
2	CANADA	1					1													
3	CANADA																			
4	CANADA																			
5	CANADA																			
1	IRELAND																			
2	IRELAND																			
3	IRELAND	1	1																	
1	NZ	1			1															
2	NZ	3	1				1	1												
	TOTAL	40	3	4	5	1	5	4	4	1	1	1	1	1	1	1	3	1	2	1

Table 15: Place adverbs classification

FAR FROM DEICTIC C.	
USA	0
U.K	5
AUSTRALIA	2
CANADA	1
IRELAND	0
NZ	1

CLOSE ADVERBS	
USA	2
U.K	9
AUSTRALIA	3
CANADA	0
IRELAND	1
NZ	4

UNDETERMINED	
USA	0
U.K	10
AUSTRALIA	2
CANADA	1
IRELAND	0
NZ	0

Tables 16, 17 and 18: Place adverbs classification regarding their distance to the deictic centre

NUMBER	COUNTRY	TIME DEIXIS	NOW	ALREADY	FIRST	STILL	DAILY	ALMOST	AGAIN	EVERYDAY	ALWAYS	SOON	NEVER	OFTEN	SOMETIMES	THEN	PREVIOUSLY	PAST (V)	PRESENT (V)	FUTURE (V)
1	USA	24					1	1										1	21	
2	USA	18																	18	
3	USA	11	2																9	
4	USA	8	2																6	
5	USA	10	1								1								8	
6	USA	6	1										1					3		1
7	USA	5																	3	2
8	USA	5	1																4	
1	U.K	24	1			1												5	14	3
2	U.K	9							2		1							1	4	1
3	U.K	16																2	11	3
4	U.K	53		1					1					1	1			4	43	2
5	U.K	48	2	1		1					1					1	1	13	27	1
1	AUSTRALIA	4	1																3	
2	AUSTRALIA	4																1	3	
3	AUSTRALIA	4	1																3	
4	AUSTRALIA	8									1		1					1	5	1
5	AUSTRALIA	26			1											1			20	4
6	AUSTRALIA	22									1						1	1	19	
1	CANADA	3							1										2	
2	CANADA	1																	1	
3	CANADA	7		1								1							5	
4	CANADA	3																2	1	
5	CANADA	6																1	5	
1	IRELAND	11	1	1	1														7	1
2	IRELAND	6																	5	1
3	IRELAND	20																5	14	1
1	NZ	5	1															1	3	
2	NZ	9								1								2	4	2
	TOTAL	376	14	4	2	2	1	1	4	1	5	1	2	1	1	2	2	43	268	23

Table 19: Time deixis data (adverbs,verb tenses)

PAST TIME ADVERBS	PRESENT TIME ADVERBS	FUTURE TIME ADVERBS	NOT SPECIFIC TIME
Already	Now	Soon	Daily
First	Still	Then	Almost
Previous	TOTAL: 16	TOTAL: 3	Everyday
TOTAL: 8			Always
			Never
			Often
			Sometimes
			TOTAL: 16

Table 20: Time of verb tenses

CLOSE TO DEICTIC CENTRE			
USA	7+69	1.111 & 10.952	
U.K	5+99	0.357 & 7.081	
AUSTRALIA	2+53	0.242 & 6.432	
CANADA	0+14	0 & 4.878	
IRELAND	1+26	0.354 & 9.22	
NZ	1+7	0.415 & 2,904	

Table 21: Time deixis (verb tenses and adverbs) regarding distance to the deictic centre (part 1)

UNDEFINED	TOTAL	AVERAGE
USA	4	0.635
U.K	7	0.5
AUSTRALIA	4	0.485
CANADA	1	0.348
IRELAND	1	0.354
NZ	1	0.415

Table 22: Time deixis (verb tenses and adverbs) regarding distance to the deictic centre (part 2)

FAR FROM DEICTIC CENTRE	TOTAL	AVERAGE
USA	0+7	0 & 1.111
U.K	4+35	0.286 & 2.503
AUSTRALIA	2+8	0.242 & 0.971
CANADA	2+3	0.697 & 1.045
IRELAND	1+8	0.354 & 2.837
NZ	0+5	0 & 2.074

Table 23: Time deixis (verb tenses and adverbs) regarding distance to the deictic centre (part 3)