



## **Bakalářská práce**

# **Comparative Phonetic Analysis of Selected Vowels in the Speech of BBC Radio and Television Presenters in the 1960s and Today**

*Studijní program:*

B0114A300068 Anglický jazyk se zaměřením  
na vzdělávání

*Studijní obory:*

Anglický jazyk se zaměřením na vzdělávání  
Německý jazyk se zaměřením na vzdělávání

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Liberec 2023



## Zadání bakalářské práce

# Comparative Phonetic Analysis of Selected Vowels in the Speech of BBC Radio and Television Presenters in the 1960s and Today

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<i>Akademický rok:</i>	2021/2022

### Zásady pro vypracování:

Cílem bakalářské práce bude analyzovat, popsat a porovnat vokalickou artikulaci zvolených segmentů u britských rozhlasových a televizních moderátorů BBC v šedesátých letech 20. století a současnosti. Práce bude rozdělena do dvou částí – teoretické a praktické. V teoretické části bude popsán vývoj artikulačních vlastností vokálů v rámci standardní britské angličtiny od roku 1960 až po současnost. V praktické části bude nejprve za pomoci fonetického softwaru Praat provedena hlasová analýza jednotlivých samohlásek ve výslovnosti moderátorů. Získaná data poté budou mezi sebou porovnána. Hlavní výzkumnou otázkou bakalářské práce bude, do jaké míry se vývoj vokalické artikulace ve standardní britské angličtině odráží ve výslovnosti moderátorů stanice BBC v šedesátých letech 20. století a současnosti.

Rozsah grafických prací:

Rozsah pracovní zprávy:

Forma zpracování práce:

Jazyk práce:

tištěná/elektronická

angličtina

### **Seznam odborné literatury:**

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Datum zadání práce:

24. června 2022

Předpokládaný termín odevzdání: 14. července 2023

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## **Anotace**

Tato bakalářská práce se zabývá fonetickou analýzou vybraných vokálů u BBC hlasatelů z 60. let a současnosti. Práce si kladla za cíl zjistit, do jaké míry se vývoj vokalické artikulace ve standardní britské angličtině odráží ve výslovnosti moderátorů stanice BBC v šedesátých letech 20. století a současnosti. Pro účel této bakalářské práce byly sestaveny dva korpusy, první čítající tři současné BBC hlasatele a druhý tři z 60. let. Dále byly zvoleny tři vokalické segmenty, u kterých došlo k změně výslovnosti a budou v korpusech analyzovány. Data byla zkoumaná na základě dvou metod – poslechu a ověření prostřednictvím programu Praat. Na závěr byla mezi sebou veškerá data porovnána. Výsledky prokázaly, že současní BBC hlasatelé mají výslovnost posunutou alespoň v jednom vokalickém segmentu. V případě BBC hlasatelů ze 60. let, zde pouze u dvou ze tří byl zaznamenán vokalický posun.

## **Klíčová slova**

Received Pronunciation, Standard Southern British English, fonetická analýza, formant, Praat, BBC reportéři, vokalický posun

## **Abstract**

This bachelor's thesis deals with the phonetic analysis of selected vowels of the selected BBC presenters from the 1960s and the present day. The aim of the thesis was to what extent the development of vocal articulation in Standard British English is reflected in the pronunciation of BBC presenters in the 1960s and today. Two corpora were created for the thesis. The first corpus consists of three contemporary BBC presenters, and the second includes three BBC newsreaders from the 1960s. In addition, three vowel shifts were selected and will be analysed in the corpora. The data were examined using two methods – the auditory assessment and the analysis in the Praat software. Finally, all the data were compared and evaluated. The results proved that all contemporary BBC newsreaders have a shifted speech at least in one selected area. Regarding the BBC broadcasters from the 1960s, the pronunciation of only two out of three could be considered to be shifted.

## **Keywords**

Received Pronunciation, Standard Southern British English, phonetic analysis, formant, Praat, BBC newsreaders, vowel shift

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## **List of Abbreviations**

AA – Auditory Assessment

BBC - British Broadcasting Corporation

F1 – Formant 1

F2 – Formant 2

RP – Received Pronunciation

SSBE – Standard Southern British English

UK – The United Kingdom

## Introduction

The number of speakers using Received Pronunciation (RP) in everyday speech is lower than ever. David Crystal, the British linguist and academic, states that even though the exact number cannot be estimated, a traditional way of RP, spoken in the past by approximately 5 % of citizens living in the UK, has fallen even more so; nowadays, the number is around 2 %. There are several reasons explaining this trend. One of them, for instance, is the broad diversity of people in the UK that has indisputably changed in recent decades. Another reason is the natural development of English pronunciation, resulting in an accent currently known as Standard Southern British English (SSBE) (Crystal 2022). BBC broadcasters served as an example of RP in history. Therefore, RP is also commonly known as BBC pronunciation.

In 2019, Geoff Lindsey published a book called *English after RP* that mentions many significant changes regarding vowels, consonants or intonation in Standard British English. In terms of vowels, Lindsey used a term *The Anti-clockwise Vowel Shift*, which explains that all vowels located in the vowel quadrilateral are moved in the opposite direction than clock functions. Lindsey also mentions the so-called *Weak Vowel Merger* dealing with the change from a vowel to a schwa sound in weak syllables before consonants.

The aim of the thesis is to analyse and compare the vocalic articulation of selected vowels in the corpora of the BBC newsreaders from the 1960s and the contemporary ones. The main research question of the BA thesis is to what extent the development of vocal articulation in RP is reflected in the pronunciation of BBC presenters in the 1960s and today. This thesis works with the hypothesis that the vowel shift should be more clearly detectable in the pronunciation of contemporary BBC newsreaders.

Such a comparative phonetic analysis can help readers understand the current state of RP and SSBE in the UK, and the data used in this bachelor thesis may motivate other students or potential researchers to study the development of RP to more depth.

For the purpose of the bachelor thesis, two corpora were created. The first corpus consists of three selected BBC broadcasters from the 1960s, and the second one involves three selected contemporary BBC newsreaders. In order to have a sufficient amount of data to analyse, three phenomena were chosen. These phenomena will be analysed and evaluated in the speeches of the BBC newsreaders. The analysis will be based on two evaluation methods – the auditory assessment and the Praat analysis, whose results will be compared and evaluated at the end.

The thesis is divided into a theoretical and a practical part. The theoretical part deals with the background concerning RP such as its historical development and selected phonological aspects, e.g., the vowel system or lexical sets. Then three selected vowel shifts will be introduced and described. The practical part mentions the necessary materials and methods used in the analysis and describes potential problems that had to be solved during the research. Lastly, all available data will be summarised and evaluated.

# **1 Background**

The main aim of this chapter is to define the term Received Pronunciation (RP) and describe the historical background. Furthermore, this chapter deals with the structure of vowels and chosen vocalic changes in RP. The last subchapter mentions the role of RP in the BBC. Further in this chapter, it is possible to find an abbreviation of the Standard Southern British English – SSBE, which will be defined and then briefly described.

## **1.1 Received Pronunciation (RP) and Standard Southern British English (SSBE)**

There are two terms and shortcuts that need to be differentiated – Received Pronunciation (RP) and Standard Southern British English (SSBE). Both terms are interchangeable for most people, which can lead to confusion. Therefore, these terms are explained below with a following description of how these terms will be precisely used in this bachelor thesis.

RP is commonly used as a standard for people that want to learn English as a foreign language, applied only in countries where British English is more dominant than American English. Wells (2007, 13) states that RP cannot be localised because it cannot be associated with any parts of the UK; therefore, it is more a social accent than a geographical one. BBC newsreaders have always been considered an example of common RP. That is the reason why the BBC presenters were chosen as a corpus for the analysis. Wells (2007, 13) explains that RP has been used in the BBC broadcast for so long that it has given a new alternative name – BBC pronunciation. Therefore, the BBC might sound like a more reliable source for the research than other commercial companies, where it is possible that the newsreaders or reports will not be producing their speech according to the standards of RP (Wells 2007, 13).

The term SSBE refers to the current pronunciation of British English resulting from the development of RP. This term is preferred because RP is mainly connected with the accent from the beginning of the nineteenth century (see Chapter 1.1.1). Therefore, it is commonly accepted to use SSBE for the accent used these days (Brown 2014, 13).

### **1.1.1 Historical Background of RP**

The beginning of the nineteenth century is connected with the rise of RP. In this period, Britain had diverse speech across all social elites. However, people from the top of society later changed how they communicated. They wanted to adopt the form of address commonly used around London, considered ‘uniquely respectable’ (Crystal 2022).

In many aspects, RP included features typical of the area in the South (Robinson 2007). Lindsey (2019, 1) mentions an example with the word *after* that was pronounced with a new broad [a] and without a final [r], whereas in America, the traditional [a] and last [r] remained unchanged.

Many people from privileged classes studied at universities located in London, Oxford or Cambridge and embraced the speech patterns based on the local accent. Later, these patterns became commonly used among most people from the top of British society (Robinson 2007).

Further education was vital for RP because children from the higher class were sent to boarding schools to learn how to behave and obey authorities, and this was closely connected with the teaching in RP. Due to the lack of books serving as guides, Daniel Jones decided to publish two books - *An English Pronouncing Dictionary* and *An Outline of English Phonetics*, considered the first books that comprehensively describe and explain the structure of RP (Lindsey 2019, 2).

The twentieth century is commonly known as an era of mass communication and the swift development of technologies. During this period, radio was widely used, which was extremely important for the further development of RP. The BBC, where RP was dominated for over 50 years, and the term BBC English became a synonym for RP, helped the whole population assimilate with the pronunciation and modified their speech as close to RP as possible.

The essential change for British society and RP started during the 1960s; for instance, the high class, connected with using RP, was damaged by several political scandals that changed British people's attitude towards RP because since then, British people have perceived RP negatively. This mistrust of the high class was even deepened with the freedom to express an opinion in some newspapers primarily aimed at politicians or other people in the United Kingdom (Lindsey 2019, 3).

Since the 1960s, it started to be less required to modify the speech, and diversity was tolerated more than ever before. It is even possible to find several cases where people from high classes tried to change and adjust their speech towards others from different social groups. Nowadays, in the United Kingdom, diversity is widely accepted; for example, people from business, political or academic areas do not have to modify their speech; in other words, the use of different accents is possible (Lindsey 2019, 4).

The change in attitudes to RP is closely connected with the end of the 20th century. Crystal (2022) claims that *'for most of the 20th century, it was the uncontested prestige accent of Britain.'* However, this situation changed with the immigrants coming to the UK and work opportunities for people using rather regional dialects in commercial radio and television stations.



According to Lindsey (2019, 5), the last mention of RP can be estimated in 1997, when Hong Kong was returned to China, which might also be considered the end of the British Empire. Since the 21<sup>st</sup> century, RP has been a term mainly connected with the past.

## **1.2 The Vowel System in RP**

Initially, it is essential to mention that two types of brackets are used when transcribing words. It is possible to use so-called slant brackets representing the phonemic transcription, whose aim is to record words said by a speaker. Square brackets can be used to illustrate the phonetic transcription, which records words finer and deeper. This bachelor thesis will be used square brackets to provide a more detailed look at changing and shifting vowel sounds (Roach 2009, 34).

Peter Roach (2009, 11) states that two groups of speech sounds in English have different distribution patterns. These two groups are called vowels and consonants. The main difference between these two groups is that vowels are produced without any constriction of the lungs, and the air coming from the lungs is not so limited. To understand the function and structure of vowels effectively, the term cardinal vowels need to be explained.

Adam Brown (2014, 21) describes the cardinal vowels as a system of description of a tongue position for any vowel appearing in a language. In the case of the English language, the cardinal vowels are placed in so-called the vowel quadrilateral. Eight cardinal vowels form a boundary of the cardinal quadrilateral in English. The first vowel is [i], which is placed in the quadrilateral in the left-high corner. To produce this vowel, the tongue must be high and front. Three more vowels are placed on the left side - [e], [ɛ] and [a]. The vowel [ɑ] stands on the opposite side of the quadrilateral – in the right-down corner, i.e., to pronounce this vowel, the

tongue must be placed low and back. On the right, they are three more vowels - [ɔ], [o] and [u] which are the only vowels that are pronounced with rounded lips, whereas the other five with unrounded lips because they are combined with rounding and tongue position that is possible to find in many languages across the world.

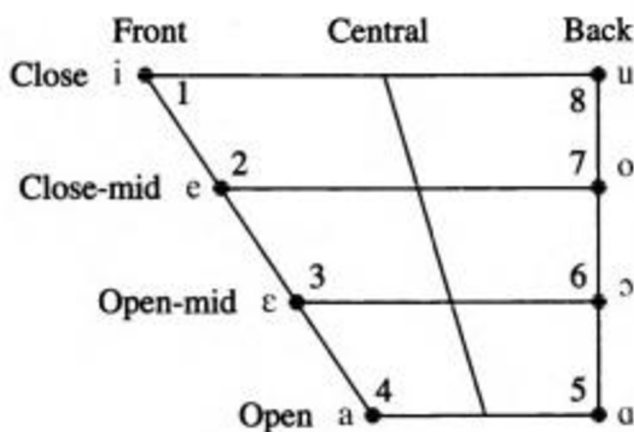


Figure 1 (Roach 2009,12) Cardinal Vowels

The English language consists of twenty-five vowels divided into three main groups – monophthongs, diphthongs, and triphthongs. Monophthongs are further divided into short and long ones. The symbols that represent the short vowels are [ɪ] (fish), [e] (bed), [æ] (cat), [ʌ] (up), [ɒ] (on), and [ʊ] (good). One more vowel can be considered short – schwa [ə]. For instance, a centre vowel appears on the first syllable of the words ‘about’ or ‘analysis’ (Roach 2009, 13–14). The other vowels from the group of monophthongs are called long vowels. The symbols that represent these vowels are the following: [ɑ:] (pass), [ɔ:] (door), [i:] (sheep), [ɜ:] (bird), [u:] (shoot) (Roach 2009, 13–17).

A diphthong is a pair of two vowels where one vowel glides smoothly to the other. There are 8 diphthongs in English – [eə], [ɪə], [ʊə], [eɪ], [aɪ], [ɔɪ], [aʊ], [əʊ]. These diphthongs are further divided into so-called centring and closing diphthongs. Centring diphthongs have schwa on the second positions; in other words, they glide

toward schwa, e.g. [eə] (hair), [ɪə] (here), [ʊə] (tourist). Closing diphthongs end with a glide toward a closer vowel; English language includes three diphthongs that glide towards [ɪ]: [eɪ] (wait), [aɪ] (my), [ɔɪ] (boy) and two more diphthongs that glide towards [ʊ] to move the tongue closer to the roof of the mouth, e.g. [aʊ] (cow), [əʊ] (show) (Roach 2009, 17–18).

Triphthongs are the most complex vowels in English. It is challenging to learn how to pronounce them correctly. It is complicated to recognise them as well. All triphthongs are closing diphthongs which move to a centre position ended with schwa, e.g. [eɪə] (player), [aɪə] (fire), [ɔɪə] (loyal), [aʊə] (hour), [əʊə] (lower) (Roach 2009, 19).

To understand the complexity and changes in all English vowels, the so-called lexical sets were created. Wells (1982, 119) defines lexical sets as lexical items where *'each of which stands for a large number of words which behave the same way in respect of the incidence of vowels in different accents.* There is 27 lexical item which, each represents its vowel sound.

KIT	ɪ	FLEECE	i:	NEAR	ɪə
DRESS	e	FACE	eɪ	SQUARE	ɛə
TRAP	æ	PALM	ɑ:	START	ɑ:
LOT	ɒ	THOUGHT	ɔ:	NORTH	ɔ:
STRUT	ʌ	GOAT	əʊ	FORCE	ɔ:
FOOT	ʊ	GOOSE	u:	CURE	ʊə
BATH	ɑ:	PRICE	aɪ	happy	ɪ
CLOTH	ɒ	CHOICE	ɔɪ	letter	ə
NURSE	ɜ:	MOUTH	aʊ	comma	ə

Figure 2 (Wells 1982,120) Lexical Sets

### 1.3 Vocalic Changes in RP

Three significant changes were chosen for the theoretical part of the bachelor thesis in order to illustrate the development of RP. These changes will be described

in the following subchapter and used in the analysis later in the practical part. The reasons why these changes were chosen are further described in Chapter 2.2.2. The end of this subchapter is supplemented with three tables that clearly illustrate all mentioned changed vowels with their examples and changes in transcriptions.

### 1.3.1 The Anti-clockwise Vowel Shift

The vowel symbols that are commonly used were suggested for RP upper class in 1962. However, the changes in RP that happened over decades were sometimes so significant that some symbols cannot be reflected. Lindsey (2019) states that SSBE, considered a modern RP, mainly heard on many radios and television channels, consists of vowels different from those possible to find in RP. Many are the same because some vowels have shifted back (see Table 1) in the quadrilateral. Therefore this trend is called ‘The Anti-clockwise Vowel Shift’ (Lindsey 2019, 17).

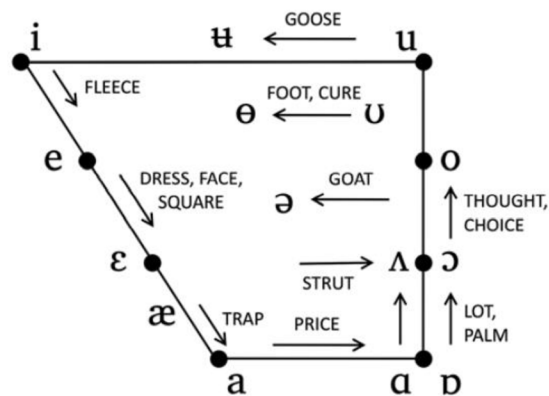


Figure 3 (Lindsey 2019, 18) The Anti-clockwise Vowel Shift

For example, according to the vowel quadrilateral (see Figure 2), the word *match* shifts from position [æ] (TRAP) to position [a]. It means in practice that changing the transcription of the word from [mætʃ] to [matʃ] is possible. There are

more examples of shifting the vowels, e.g., the word *choice* has been moved from the position [ɔ] to position [o]. To pronounce the word according to the SSBE, it is necessary to have a tongue a little bit higher and be more closed.

Several essential changes can be deduced from The Anti-Clockwise Vowel Shift presented in Figure 2. Firstly, all front vowels have been shifted into lower positions than they used to be, e.g., the word *match* or *face*. Lindsey (2019) adds that a learner should realise that a vowel [a], found in the *match*, is pronounced more in front than in other languages.

Secondly, some vowels have been shifted more to the back position, e.g., the word *size* is nowadays more transcribed as [saɪz] rather than [saɪz]. The back vowels are more common than ever, so the symbol [ʌ] is used more.

The third significant change can be seen in raised vowels that have been shifted higher than they used to be before. It means that, for example, the word *top* is pronounced instead with the symbol [ɔ] than [ɒ], so the transcription in SSBE is instead written [tɔp] than [tɒp], or the word *fought* has changed its position from the vowel [ɔ] nearer to the vowel [o], so the transcription of the word was rewritten from [θɔ:t] to [θo:t] (Lindsey 2019, 20).

The last essential change in The Anti-clockwise Vowel Shift mentions so-called centralisation. All vowels that were previously pronounced with back articulation are shifted to the centre; for instance, the position of the word *pure* was changed from the vowel [ʊ] to [θ], so the word will be transcribed from [pjʊə] to [pjθə]. Diphthongs have been centralised as well; for example, the phrase *boat* from [oʊ] to [əʊ], so the transcription changed from [boʊt] to [bəʊt].

Lindsey (2019) further mentions changes that are so minimalistic that the previous symbols can still be used, for example, the word *kit*. Lindsey also states one

example of a vowel that goes even against the shift movement. For example, the word *south* used to be pronounced with the vowel symbol [aʊ], but nowadays is mainly transcribed with the vowel symbol [aʊ]. Therefore, the transcription was changed in the opposite direction from [saʊθ] to [saʊθ] (Lindsey 2019, 21).

### 1.3.2 Weak Vowel Merger

This change is commonly known in American English, where several examples can be found where a weak vowel merger occurs. It includes the vowel sounds [ɪ] (KIT) and [ʊ] (FOOT), often used in weak syllables. If these vowel sounds are used before consonants, they can be interchanged or even replaced by a schwa (Wells 1982, 167).

However, weak vowel merger is more complex in SSBE because it includes words with FOOT in the weak syllable and [j] stands before, e.g., *particularly*. Therefore, in this particular case, the transcription of the word should be changed from [pə'tɪkjʊləli] to [pə'tɪkjələli].

As mentioned before, even KIT can be replaced with a schwa if the sound is in the weak syllable—for example, the word *foreign*, whose transcription has been changed from ['fɔrɪn] to ['fɔrən]. Lindsey (2019, 39) states that many words that included the sound [ɪ] in SSBE remained unchanged, e.g., the word *Lenin* ['lenɪn]. Several prefixes and suffixes, including the sound [ɪ], are also unchanged, e.g., *mis-* and *-ing*. Suffixes written with 'e' but pronounced with KIT are replaced by schwa in SSBE. The suffixes are *-et*, *-est*, *-less*, *-ness*, *-red*, and *-ress*. For example, the transcription of the word *tablet* has been changed from ['tæblɪt] to ['tæblət].

The last group of words where the change was also included are the nouns or adjectives with *-ate* suffixes that are pronounced as [ɪt] in RP, but they have been replaced with [ət] in SSBE, e.g., *intermediate*, the transcription has been changed

from [ˌɪntə'miːdɪt] to [ˌɪntə'miːdɪət]. However, it is essential to mention that in words that consist of two syllables, the sound [ɪ] should still be included, e.g., *senate* ['senɪt] (Lindsey 2019, 40).

### 1.3.3 Prolongation of the [ɪ] Sound

The [ɪ] sound is 'a relatively short, lax, fairly front and fairly close unrounded vocoid.' This sound is also commonly known as 'short I' or as a KIT (Wells 1982, 127). However, there is a group of words whose tendency is to be prolonged, i.e., that tend to be higher and more front as well. These words are divided into three main groups. The first is a group of words where KIT stands before a vowel, e.g., *ambitious*, *reactivate* or *associate*. The second one includes words ending with the sound, e.g., *electricity*, *only* or *coffee*. The last group consists of words where the sound occurs at the end of the diphthongs [eɪ] or [aɪ], e.g., *may*, *place*, *soy* or *employ* (Lindsey 2019, 31).

Lindsey (2019) further mentions that only the first and second groups are prolonged in SSBE. For example, a word *happy* whose transcription according to RP is ['hæpi] should be in SSBE transcribed as ['hæpi:] or a word *electricity* where the transcription has been changed from [ɪˌlek'trɪsəti] into [ɪˌlek'trɪsəti:]. The last group of words have a rather tendency to be transcribed as [j] sound. For instance, the pronoun *my* has been changed from [maɪ] to [maj] or a word *price* should be in SSBE transcribed rather as [praɪs] than [praɪs].

Example	RP	SSBE
match	[mætʃ]	[matʃ]
size	[saɪz]	[sAɪz]
top	[tɒp]	[tɔp]
pure	[pjʊə]	[pjʊə]

*Table 1 Examples of The Anti-clock Vowel Shift*

Example	RP	SSBE
boat	[boʊt]	[bəʊt]
foreign	[ˈfɔrɪn]	[ˈfɔrən]
tablet	[ˈtæblɪt]	[ˈtæblət]
intermediate	[ˌɪntəˈmiːdiət]	[ˌɪntəˈmiːdiət]

*Table 2 Examples of the Vowel Merger*

Example	RP	SSBE
ambitious	[æmˈbɪʃəs]	[æmˈbrɪʃəs]
reactivate	[riˈæktɪveɪt]	[riːˈæktɪveɪt]
electricity	[ɪˌlekˈtrɪsəti]	[ɪˌlekˈtrɪsətiː]
coffee	[ˈkɒfi]	[ˈkɒfiː]
may	[meɪ]	[mej]
soy	[sɔɪ]	[sɔj]

*Table 3 Examples of the Prolongation of the [ɪ] Sound*



## 1.4 Previous Studies in RP

The change of RP is an issue that is researched and analysed continuously. Several articles or researches deal with the change and shifting of vowels. For instance, one of them is an article by Andrej Bjelaković from the University of Belgrade. This study aimed to add more acoustic data of vowels to the available database dealing with the changes in RP. Bjelaković used two corpora consisting of seven male and seven female contemporary BBC newsreaders and chose lexical sets that will be further analysed in Praat using the function called ‘Get formant function’. The result of the analysis is a set of F1 and F2 frequencies for each vowel which are further compared with already acquired data from works with rather ‘*pedagogical purpose*’ (Bjelaković 2017, 501–4). At the end of this article, Bjelaković highlights that this study was not focused on spontaneous speech, and BBC newsreaders were reading the text from a piece of paper. This study can be useful for other researchers in the future if they would need some sets of formants to compare with.

Another research dealing with vowel change in RP was published in the Journal of the International Phonetic Association in 2000. This study aimed to analyse the monophthongs and their shift in the nine speeches of Queen Elizabeth the Second from the 50s, the late 1960s, early 70s and 80s. The analysis was done similarly to the previous one mentioned above. Several monophthongs were selected in all speeches, and then their F1 and F2 frequencies were measured. After that, all acquired data were compared together to ascertain whether there was a provable shift. The study concluded that the F1 frequencies were significantly higher in the 1960s and 80s than in the 50s. Regarding the F2 frequencies, the values did not change drastically, or there was a slight change in the 80s. The main conclusion of

this analysis is that it was proven that the change of F1 frequencies and even the pronunciation of Queen Elizabeth was changed, even though she was considered a great example of how RP should be (Harrington, Palethorpe, and Watson 2000, 63).

## **2 Method**

The aim of the practical part is to provide details about tools and methods used during the analysis. Some potential problems that must be solved are also mentioned. This chapter consists of several subchapters, for example, the biography of the selected BBC presenters or used recordings and vowels for the analysis. Furthermore, this chapter also introduces the evaluation form that plays an essential role in the following research and software called Praat, explaining how this program can be used and how to detect the possible change of the selected vowels.

### **2.1 BBC Presenters**

This subchapter provides a brief biographical description of the selected BBC presenters chosen for this bachelor thesis and for further analysis. The BBC broadcasters will be divided according to the era they belong to, i.e., the 1960s and the present. The list of BBC newsreaders consists of men only. The reason why only men were selected for the analysis is further described at the end of this subchapter.

#### **2.1.1 BBC Newsreaders from the 1960s**

Cliff Michelmore is the first BBC presenter representing this era. He was born on 11 December 1919 in Cowes. He started working in radio for British Forces Network in 1947. About three years later, he became a BBC presenter. During his career, he won an award called Bafta because of his work in many commonly known TV programmes such as Tonight (Sharp n.d.). He commented and presented several important events in the UK, e.g., general elections in 1964, 1967, and 1970. Before he ended his career as a presenter, he returned to the radio when he had stayed until the year 2000 (Barker 2016).

The second newsreader is Derek Osborne Hart. He was born on 18 March 1925 in Hertfordshire. He was popular among people because of the Tonight

programme, where he presented during the 50s and 1960s. Hart also worked as an interviewer and had an opportunity to speak with many famous people, such as Christopher Isherwood and John Wyndham. During his career at the BBC, he was asked to narrate several documents, one of which is *The Industrial Relations Act: An Introduction*, directed in 1971 or a document about an English writer William Somerset Maugham directed in 1969 ('Derek Hart' n.d.).

Kenneth Allsop is the last BBC newsreader chosen for this research. He was born on 29 January 1920 in Holbeck. Allsop was not only a newsreader, he also wrote several successful writings such as *The Bootleggers* or *In The Country*. He presented as a BBC newsreader mostly during the 1960s. After that, he was not seen on TV, mainly due to a serious health condition caused by his injury from the Second World War, which resulted in amputating his leg in 1943 ('Kenneth Allsop' n.d.).

### **2.1.2 Contemporary BBC Newsreaders**

Benjamin Mark Bland Boulos, commonly known as Ben Boulos, born in 1984 in Countesthorpe, is the first contemporary BBC newsreader chosen for this bachelor thesis. At the age of 38, he belongs among the youngest BBC newsreaders seen on TV. Despite his age, he is well known and respected among his colleagues and other TV viewers. He presents on programmes such as *BBC Word News* or *BBC One*. He also specialises in business presenting and business in the UK. He used to be seen on several other channels, such as *Channel M Television* (Boulos, n.d.a). In 2021, he changed his surname from Bland to Boulos because of another journalist with the same surname (Boulos, n.d.b).

Chris Rogers, born in 1975, is the second presenter chosen for the analysis. He started his career at the age of 19 when he was in charge of the child programme called *Newsround*. One of the most successful reportages was the one recorded in

2013 dealing with the gangs selling women to UK brothels. He had to spend several months covered as a trafficker. Chris Rogers appeared on the BBC for the first time in 2010 and has been presenting ever since. He is mostly seen in programmes such as BBC World News ('Chris Rogers' 2009).

The last chosen contemporary BBC newsreader is James Edward Reynolds. He was born in 1974 in Kingston-upon-Thames, and his father also worked for the BBC. He started his career at the BBC in 1997 as a trainee working for the regional programme called East Midlands Today. Since 1998 he has been in many states, e.g., Chile, Jerusalem or China, as a correspondent ('James Reynolds' n.d.). Currently, he is back in London and working as a BBC presenter on BBC World News and the BBC News Channel.

It is important to highlight that no women were selected for the corpora because of the lack of female BBC presenters performing in the 1960s. Nan Winton was the first female presenter who started to work for the BBC in 1960. However, her career did not take so long because people, who watched BBC regularly, considered women unsuitable for reading the news because they *'were too frivolous to be the bearers of grave news'* The first female BBC newsreader that was able to gain popularity was Angela Rippon. However, this woman started her career at the BBC in 1975. It means she is out of range of the period chosen for this bachelor thesis ('First Female Newsreader in Vision' n.d.).

## **2.2 Material and Procedure**

Before an analysis can be accomplished, several steps and procedures must be done to prepare all necessary materials. Firstly, it was essential to find the vowels with a high percentage of occurrence and the possibility of being verified by auditory

assessment and Praat. Then, suitable recordings involving enough words with the vowels chosen for the analysis were necessary.

### **2.2.1 Recordings**

Recordings served as the main tool because the voices of the BBC newsreaders are further analysed by auditory assessment and then by the software called Praat (see subchapter 2.2.3). The recordings from each period were chosen to be as close to each other as possible to avoid some differences in the pronunciation of the newsreaders. In the case of the BBC newsreaders from the 1960s, the one whole recording was chosen because all three men presented in one broadcast together. It was recommended to choose BBC newsreaders over the age of 50 because of the impossibility to prove the shift clearly. The accent was also another important aspect that needed to be considered to choose a suitable candidate. All chosen broadcasters were born in England, which was an essential factor because, in this case, there is a certainty that all newsreaders use RP while presenting at the BBC, and their speech is not influenced by any accent.

### **2.2.2 Selected Vowels**

Three phenomena were selected for the purpose of the analysis in this bachelor thesis. The first is a shift from TRAP to [a], further described in subchapter 1.3.1. This shift is easily recognisable in recordings and can be easily verified in Praat as well. The next one is the shift from KIT to LETTER, which is called The Weak Vowel Merger (see Subchapter 1.3.2). Even though not many words occur in speech, the shift might be simply detectable, and if not, then Praat will undoubtedly identify it. The last selected shift is from the vowel KIT to FLEECE, whose further description is found in subchapter 1.3.3. This phenomenon is characteristic because it does not follow the so-called Anti-clockwise Vowel Shift, but the vowel is moved

up, which makes it longer. Its detectability, either by auditory assessment or in Praat, was also the reason why the shift was chosen.

To summarise, it is possible to name three conditions used while choosing the vowels for further analysis. The first was the occurrence in all recordings, the second was the ability to recognise the sounds by auditory assessment, and lastly was the possibility to analyse all sounds in Praat. If a sound fulfilled the following requirements, it could be chosen and further used in the following analysis.

### **2.2.3 Analysis**

The analysis itself was divided into two parts – the auditory assessment and using Praat as proof of the finding. Before the analysis, creating an evaluation form where all results could be recorded was necessary. The description of the evaluation form is mentioned below in subchapter 2.2.3.1.

In order to distinguish vowels that are clearly shifted from those where the shift may be speculative, the condition based on a number of incidences was created. To be marked as shifted, each BBC presenter must pronounce at least three out of four words as shifted. If this condition is fulfilled, the BBC newsreader will be marked with a thick, meaning that his pronunciation is considered to be shifted. The condition will be used at the end of the analysis process, where all data will be evaluated and compared together. The number of incidences was set at  $\frac{3}{4}$  because then there should be either none or minimal doubts about whether the pronunciation of each BBC broadcaster is relevant or speculative.

#### **2.2.3.1 Evaluation Form**

Each vowel will be evaluated in two steps. First, the auditory assessment will be done (see subchapter 2.2.3.2), and then the software Praat will follow as proof of the auditory assessment. The evaluation sheet (see Appendix A) was created to

record all findings logically (see Appendix 1). There is one sheet for each vowel change and consists of all chosen BBC newsreaders with the words selected from their recordings and blank spaces where the tick or cross will be used, indicating whether the change can be heard and if there is a measurable change done by Praat. All evaluation sheets will be further used in the last chapter, divided into subchapters according to this sheet.

### **2.2.3.2 Auditory Assessment**

The auditory assessment is the process of evaluation that should evaluate whether people are able to recognise the shift without any help from modern technology. The auditory assessment is the first step of the whole analysis process. All selected words will be played several times, and the result will be recorded in the evaluation sheet. It is important to highlight that this auditory assessment is done only by the author of this bachelor thesis and not by somebody else.

### **2.2.3.3 Praat**

Praat is a phonetic program designed by Paul Boersma and David Weenink at the University of Amsterdam ('Praat: Doing Phonetics by Computer' n.d.). Its purpose is to provide an analysis of selected aspects of speech, such as pitch, formant or intensity. Selected sounds recorded by a microphone or other audio devices can be uploaded into Praat. The sounds can also be uploaded as a sound file from a computer disk. The whole sound window used in this software is divided into two main parts – the wave form and the spectrogram.

The wave form serves as a visualisation of sounds that were uploaded directly into Praat. In this part, it is possible to see the pitch of the concrete sound or the pause said by a speaker. The spectrogram shows the low or high frequencies recorded in shades of grey according to their intensity. All formants from each sound



are represented by red dots that are clearly visible. Each formant has its specific position in the spectrogram. F1 is situated at the bottom, F2 in the middle and F3 at the top. Praat will be used in this analysis to prove whether the auditory assessment was successful. To do that, only the formant F1 will be used, and other formants will not be considered.

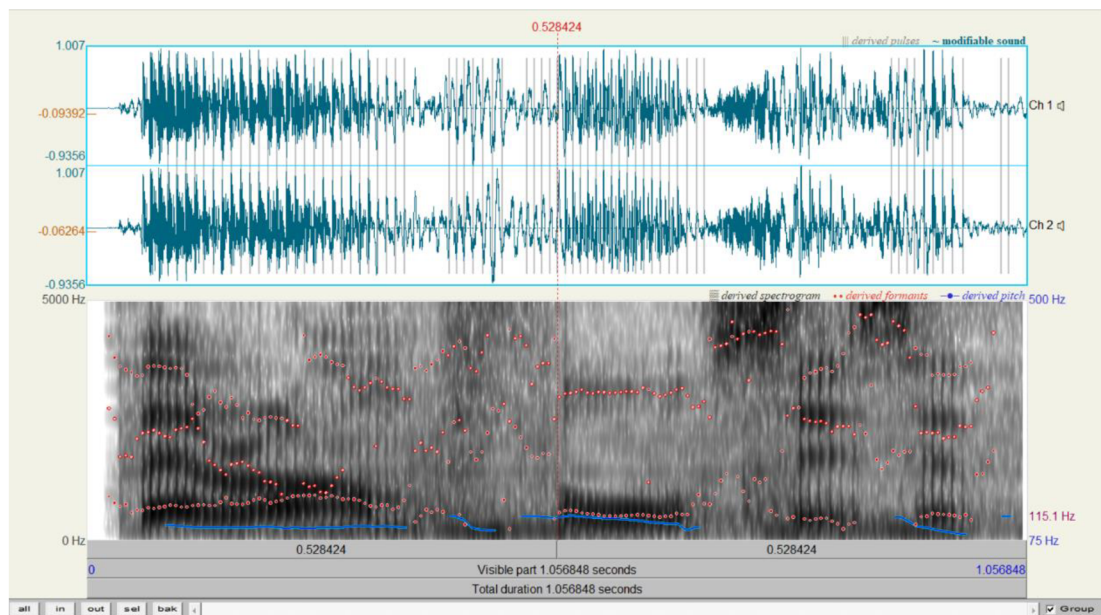


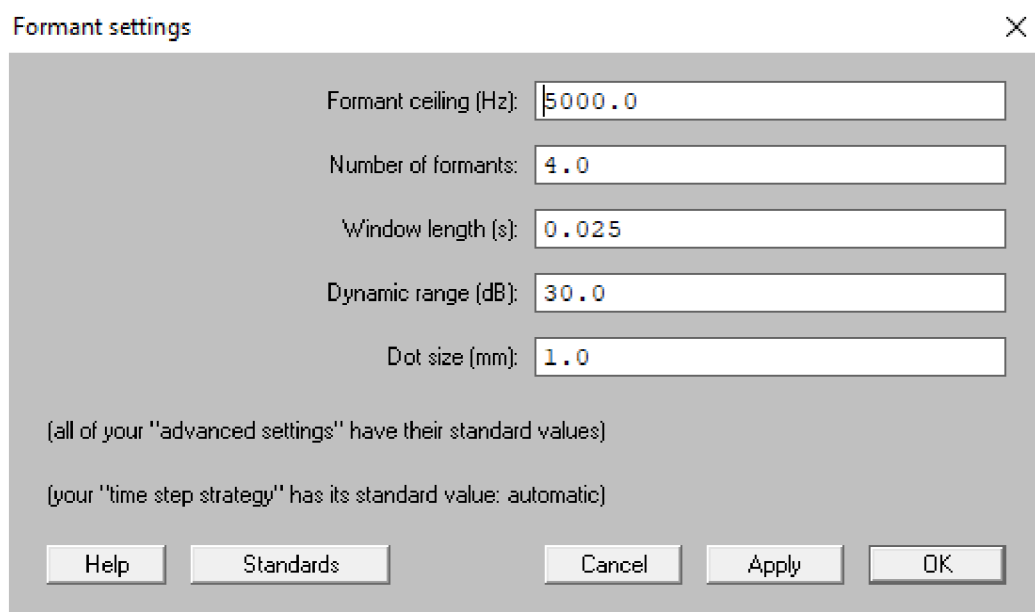
Figure 4 Example of Praat Analysis

### 2.3 Measurement

In this step, the F1 formant has to be measured in Praat to see whether the frequency will be changed and hence the vowel will be shifted. There is a function that can measure the value of the F1 formant. The function is called ‘Get formant one’ (see Figure 6). The values gained from this function will be further compared with the table of frequencies used in the book Gimson’s Pronunciation of English written by Alan Cruttenden, and this comparison will determine the possible vowel shift

In order to get accurate results, the formants in Praat need to be set correctly. All parameters used in the analysis, i.e., formant ceiling, number of formants, window length, dynamic range and dot size, can be adjusted in the section called

‘Formant Settings’ There are different sets of settings depending on whether the male or female voice is analysed. It is necessary to be sure that Praat is set for the analysed gender because then all values of the F1 formant might not be correct. The corpora of this bachelor thesis consist of male voices only. Therefore, the setting of values is the following. The formant ceiling, also commonly known as the highest possible frequency, was set to 5000 Hz. The number of formants was 4, but only the F1 formants are the aim of this bachelor thesis. The window length is the duration of the analysis in a window, and for men, voices are typically set to 0.025 s. The last two parameters are the dynamic range and dot size, whose values are not rested on the gender of the speakers. The dynamic range for this case is 30 dB, and the dot size is 1 mm.



*Figure 5 The Formant Settings in Praat*

Three main problems need to be solved during the measurement. The first problem was connected with the quality of recordings, especially the recording from the 1960s. When the words were pasted into Praat, the software had problems measuring the F1 formant correctly because of disturbing elements such as cracking. If this situation happened, another program called Audacity was used to improve the

recordings by eliminating all disturbing noises. Sometimes even this elimination did not help. Therefore, it was necessary to find another more appropriate word. The second problem concerns the impossibility of isolating the vowel in the recording for several reasons. One of them is that one BBC newsreader did not say the word properly, i.e., clearly, and the sound was then not measurable. In this case, new words had to be found as well.

The last problem concerning the measurement process was to find the exact frequency of the F1 formant that could be compared with the frequency measured in the analysis. The table created by Cruttenden (see Table 7) was used for the comparison. However, several vowel sounds, such as [a] or [ə], are missing. It was necessary to find an alternative in terms of the F1 formant frequency. The most appropriate one seemed to use a similar vowel sound sharing the same position and hence the same value of F1 formant in the vowel quadrilateral. In other words, if the F1 formant of the vowel sound [a] does not exist, the F1 formant of LOT [ɒ] is used. However, the schwa sound was the most challenging one because this sound does not share the same position and the F1 format with any other sound. From the vowel quadrilateral is visible that the schwa sound lies in the middle of the sounds DRESS [e] and STRUT [ʌ]. Therefore, it was determined that the F1 formant of the schwa sound would be the deduction of the F1 formant DRESS from the F1 formant STRUT divided by two.

At the end of the whole measurement process, all values of F1 formant were filled in the table and then compared together to see if there were some shifts vowel shifts or not. After that, the evaluation sheet was filled and compared with the auditory assessment. This helped to visualise how accurate the auditory assessment was compared to the measurement in Praat.

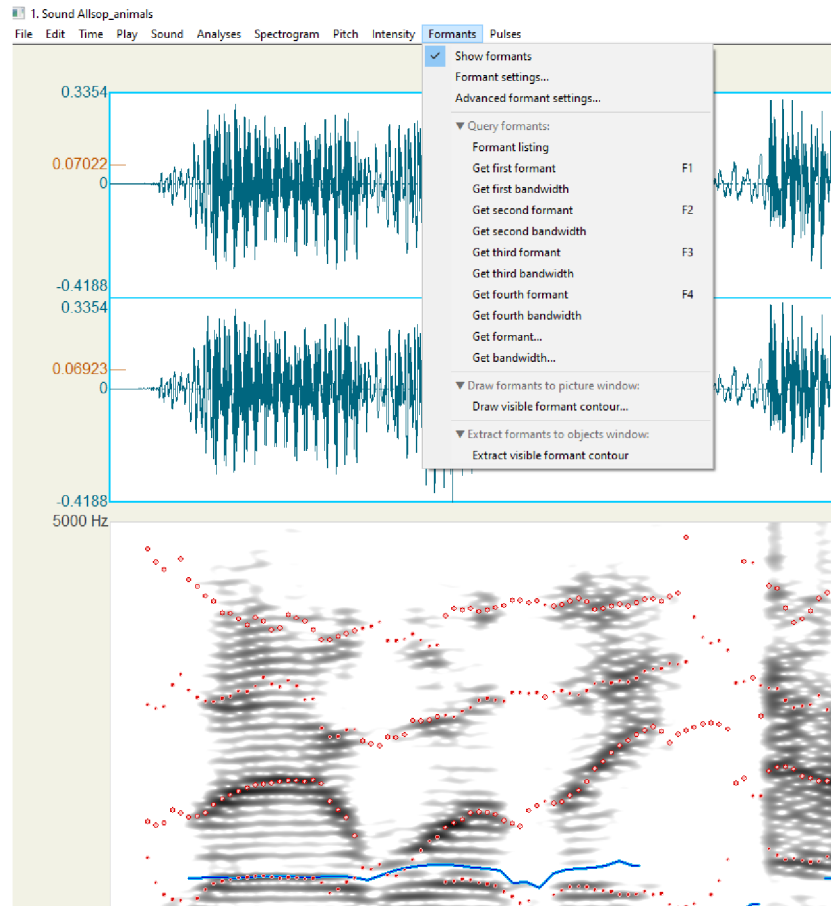


Figure 6 'Get First Formant' Function

Pure vowels	F1		F2	
	Male	Female	Male	Female
/i:/	280	303	2,249	2,654
/ɪ/	367	384	1,757	2,174
/e/	494	719	1,650	2,063
/æ/	690	1,018	1,550	1,799
/ʌ/	644	914	1,259	1,459
/ɑ:/	646	910	1,155	1,316
/ɒ/	558	751	1,047	1,215
/ɔ:/	415	389	828	888
/ʊ/	379	410	1,173	1,340
/ʊ:/	316	328	1,191	1,437
/ɜ:/	478	606	1,436	1,695

Figure 7 (Cruttenden 2014, 105) Formant Frequencies for RP Pure Vowels

### 3 Results

This final chapter aims to provide the analysis results and compare the selected phenomena from the chosen BBC newsreaders in the 1960s and the contemporary ones. This chapter is divided into four subchapters. The first three subchapters deal with the selected phenomenon. In the last subchapter, all the presented results are summarised. Each subchapter includes a table with the selected words and the names of the BBC newsreaders, and the symbols indicating the shift (see chapter 2.2.3.1). This table served as an evaluation form during the analysis, which was done by the auditory assessment and then by the Praat software. All measured frequencies are possible to find in Appendix B – G.

#### 3.1 Vowel Change from TRAP [æ] to [a] Sound

This vowel change is based on the principle of so-called The Anti-clockwise Vowel Shift, which means that the pronunciation of the vowels located in the vowel quadrilateral is changed in the opposite direction than clock functions (see subchapter 1.3.1). For instance, it is expected that the word *snowman*, whose transcription is recorded as [ˈsnəʊ,mæn], should be changed into [ˈsnəʊ,man] or the word *gas* should be shifted from [gæs] to [gas].

##### 3.1.1 BBC Newsreaders from the 1960s

The results of the BBC newsreaders from the 1960s show a disproportion between the results acquired by the auditory assessment and Praat. Almost in all words, there was no noticeable shift by hearing. The only exception was the word *band* said by Derek Hart. However, Praat did not confirm auditory assessment and illustrated the opposite result, i.e., the shift was detected in the majority of words said by the BBC newsreaders. There are only two words (*snowman* and *match*) said by Cliff Michelmores, whose formant F1 was too low to mark as the shifted ones.

This finding is interesting, and it may be asked, why is that. Several reasons can explain the difference. Firstly, the recording is old, and some of the noises appearing in the recording could influence the results. A program called Audacity was used to eliminate all noises, but some of them were still hearable. Secondly, the shifting process was already in process but not completed. Therefore, the differences in words cannot be directly heard by a person, but a piece of software can measure them. Concerning the fact, this vowel shift is unique compared to the other phenomena.

Name of the Newsreader	Selected Words	AA	Praat
Cliff Michelmore	bad	✗	✓
	snowman	✗	✗
	cancel	✗	✓
	match	✗	✗
Derek Hart	band	✓	✓
	matters	✗	✓
	began	✗	✓
	avalanche	✗	✓
Kenneth Allsop	animals	✗	✓
	gas I	✗	✓
	channel	✗	✓
	gas II	✗	✓

*Figure 8 The Vowel Change from TRAP to [a] Sound of the BBC Newsreaders from the 1960s*

### 3.1.2 Contemporary BBC Newsreaders

The auditory assessment clearly shows a shift in contemporary BBC newsreaders. As for Ben Boulos, the shift was indicated only in words *emancipation* and *palace*. Words said by James Reynolds evince higher occurrence. The word *damage* was the only one where the auditory assessment did not detect the shift. In the case of Chris Rogers, the incidence is the same as by Ben Boulos, i.e., two words, *factual I* and *factual II*, were marked as the words where the shift was heard. In the case of the contemporary BBC newsreaders, Praat, in the majority of words, confirmed the shift from TRAP to [a]. In only one word (*emancipation*), the formant F1 was not high enough to consider it to be a shift.

Name of the Newsreader	Selected Words	AA	Praat
Ben Boulos	emancipation	✓	✗
	Japan	✗	✓
	overshadowed	✗	✓
	palace	✓	✓
James Reynolds	nationally	✓	✓
	calculate	✓	✓
	damage	✗	✓
	graphic	✓	✓
Chris Rogers	factual I	✓	✓
	ambassador	✗	✓
	factual II	✓	✓
	act	✗	✓

Figure 9 The Vowel Change from TRAP to [a] Sound of the Contemporary BBC Newsreaders

## 3.2 Weak Vowel Merger KIT [ɪ] to LETTER [ə]

The Weak Vowel Merger is commonly connected with the pronunciation of American English. The change includes a vowel KIT rather used in weak syllables, which can be replaced with LETTER. Several suffixes are connected with the change from KIT to LETTER, e.g. *-est*, *-et*, or noun/adjective *-ate*. According to this theory, e.g., the word *bullet* might be rather pronounced as ['bʊlət] than ['bʊlɪt], which is a transcription that is still possible to find in English dictionaries.

### 3.2.1 BBC Newsreaders from the 1960s

The auditory assessment proved that the majority of words evinced a vowel shift, and the occurrence is comparable with the contemporary BBC newsreaders. In this case, five words were not shifted to schwa sound – *latest I* and *latest II* by Cliff Michelmore, *bullet* and *longest* said by Derek Hart and *hundred* said by Kenneth Allsop. However, the results of the Praat measurement showed that the majority of words were detected as non-shifted, and they were marked with a cross. Only the values of formants F1 in words *hundred* by Derek Hart and *desperate III* by Kenneth Allsop were increased, and therefore they can be marked with a tick as shifted vowels. Some words, such as *blanket* and *late*, did not have the value of the formant F1 responding with the value of the schwa sound. Hence, the shift is not provable.



Name of the Newsreader	Selected Words	AA	Praat
Cliff Michelmore	latest I	✗	✗
	latest II	✗	✗
	blanket	✓	✗
	late	✓	✗
Derek Hart	bullet	✗	✓
	hundred	✓	✓
	discovered	✓	✗
	longest	✗	✗
Kenneth Allsop	desperate I	✓	✗
	desperate II	✓	✗
	hundred	✗	✗
	desperate III	✓	✓

Figure 10 Weak Vowel Merger from KIT to LETTER of the BBC Newsreaders from the 1960s

### 3.2.2 Contemporary BBC Newsreaders

The auditory assessment of the contemporary BBC newsreaders confirmed the shift with respect to the majority of words. The words that were detected as non-shifted are *latest I* and *latest II* said by Ben Boulos, and *latest I* and *latest II* said by James Reynolds. It is important to highlight that all contemporary BBC newsreaders said this word, but only in the case of Chris Rogers, the shift was audible and hence could be marked with a tick. Interestingly, in many cases, the results from auditory assessment do not correspond with the results obtained from Praat. The majority of words were not marked in the Praat analysis as shifted. Many words that were positively indicated in the auditory assessment do not have the values of formant F1 close enough to be marked as words with a shifted vowel, e.g., *target* said by James Reynolds and words *richest*, *latest I* and *latest II* said by Chris Rogers. In the case of

the word *latest II*, said by Ben Boulos, Praat provided the opposite result, i.e., the vowel is shifted based on the formant F1, but the shift itself was not detected.

Name of the Newsreader	Selected Words	AA	Praat
Ben Boulos	carpet I	✓	✓
	carpet II	✓	✓
	latest I	✗	✗
	latest II	✗	✓
James Reynolds	latest I	✗	✗
	target	✓	✗
	latest II	✗	✗
	highest	✓	✓
Chris Rogers	biggest	✓	✓
	richest	✓	✗
	latest I	✓	✗
	latest II	✓	✗

Figure 11 Weak Vowel Merger from KIT to LETTER of the Contemporary BBC Newsreaders

### 3.3 Vowel Change from KIT [ɪ] to FLEECE [i:]

This shift includes words that have tendencies to move KIT higher and more front – this position is commonly known as FLEECE. There are three main groups of words – KIT stands before a vowel, words ending on KIT and occurrence at the end of the diphthongs FACE and PRICE. For instance, the word *story* should be rather transcribed as ['stɔ:ri:] than ['stɔ:rɪ].

### 3.3.1 BBC Newsreaders from the 1960s

The last chosen vowel shift results indicated that this phenomenon had the lowest incidence of all vowel shifts selected for the bachelor thesis. The auditory assessment of the BBC newsreaders from the 1960s did not manifest the shift in the majority of words. The shift was proved only in these four words: *story* by Cliff Michelmore, *heavily* and *country* by Derek Hart and *sixty* by Kenneth Allsop. The Praat analysis did not detect the words mentioned above, i.e., all these words did not have the value of the formant F1 low enough to declare they are shifted. Moreover, the word *twenty* said by Derek Hart evinces the opposite way, i.e., the auditory assessment did not confirm, but Praat did. Other words chosen for the analysis had no marked vowel shift either in the auditory assessment or Praat measurement.

Name of the Newsreader	Selected Words	AA	Praat
Cliff Michelmore	January	✗	✗
	story	✓	✗
	country	✗	✗
	electricity	✗	✗
Derek Hart	heavily	✓	✗
	twenty	✗	✓
	country	✓	✗
	bitterly	✗	✗
Kenneth Allsop	sixty	✓	✗
	history	✗	✗
	whisky	✗	✗
	electricity	✗	✗

Figure 12 The Vowel Change from KIT to FLEECE of the BBC Newsreaders from the 1960s

### 3.3.2 Contemporary BBC Newsreaders

The auditory assessment in the analysis of the contemporary BBC newsreaders proved that most of the words could be marked as shifted and determined five words whose shift was not recognisable by hearing it. The words are: *casualty II* said by Ben Boulos, *emergency* and *city*, said by James Reynolds, *security* and *story*, said by Chris Rogers. Praat confirmed the shift these two words all said by James Reynolds: *energy I* and *energy II*. However, the Praat analysis manifested that most of the selected words were indicated as non-shifted. It might be interesting to highlight that there is a word *security*, which was previously marked as a not shifted one in the auditory assessment, but Praat determined the shift as positive. In other cases, the shift was rejected by all methods, i.e., the auditory assessment and Praat measurement, e.g., *casualty II* by Ben Boulos or *story* by Chris Rogers.

Name of the Newsreader	Selected Words	AA	Praat
Ben Boulos	casualty I	✓	✗
	movie	✓	✗
	country	✓	✗
	casualty II	✗	✗
James Reynolds	emergency	✗	✗
	energy I	✓	✓
	energy II	✓	✓
	city	✗	✗
Chris Rogers	security	✗	✓
	city	✓	✗
	policy	✓	✓
	story	✗	✗

Figure 13 The Vowel Change from KIT to FLEECE of the Contemporary BBC Newsreaders

### 3.4 Summary of Results

The condition described in Chapter 2.2.3 must be mentioned to consider the selected vowel shifted. The condition says that of the four selected words for each phenomenon of each BBC newsreader, at least three of them must be clearly shifted. At the end of this subchapter are placed three tables referring to the occurrence of all BBC newsreaders separately (for a specimen, see Appendix H).

The results of the auditory assessment of the BBC newsreaders from the 1960s show that Kenneth Allsop, in terms of the weak vowel merger from KIT to LETTER sound, was the only BBC newsreader that fulfilled the condition. Hence, his pronunciation could be marked as shifted. In other cases, the incidence was not high enough to be claimed as shifted. However, the incidence of some BBC newsreaders, e.g., Cliff Michelmore and Derek Hart (weak vowel merger), is 2/4, which is relatively close to the given border. The analysis done by Praat indicates that the pronunciation of Derek Hart and Kenneth Allsop, in case of the vowel shift from TRAP to [a] sound, has a sufficient number of occurrences to be marked with a thick. It might be interesting to highlight that some of the occurrences are provable by Praat only, this can be an example of Derek Hart and Kenneth Allsop already mentioned above.

In terms of the pronunciation of contemporary BBC newsreaders, the results show an interesting fact. The pronunciation of each BBC newsreader was shifted in only one of the three selected phenomena. In other words, the pronunciation of James Reynolds was indicated positively Regarding the vowel change from TRAP to [a] sound only. As for Chris Rogers, the occurrence was proven with respect to the weak vowel merger. The number of incidences concerning Ben Boulos was sufficient enough in the vowel change from KIT to FLEECE only. In the analysis

done by Praat is visible that the pronunciation of all BBC newsreaders, in terms of the vowel shift from TRAP to [a] sound, is changed. This analysis also states that the pronunciation of Ben Boulos is shifted in another phenomenon – weak vowel merger.

It is possible to see the great disproportion between the auditory assessment and the Praat analysis. Therefore, it had to be decided whether the results of the auditory assessment or the Praat analysis would be decisive in the final analysis. Due to the sensitivity, low possibility of inaccuracy and advanced state of technology, it was decided that the results from the Praat analysis would be prioritised, and the data gained from the auditory assessment would have a supportive character.

For that reason, the vowel shift from TRAP to [a] sound is the only one of the three selected where the shift is unequivocally proven. Thus, it is the only vowel shift that was taken into consideration only. The pronunciation of the majority of the BBC broadcasters, except Cliff Michelmore, satisfied the predetermined condition. Hence, they could be marked as shifted and recorded into a table with a tick. In the case of other selected phenomena, there was only one BBC newsreader whose words had a sufficient amount of occurrence to be claimed as shifted, and that was Ben Boulos in the weak vowel merger from KIT [ɪ] to LETTER [ə]. Other BBC newsreaders did not have the incidence sufficiently high, and therefore their pronunciation was evaluated as non-shifted and marked with a cross into the tables.

To interpret all data from the tables below, it is possible to deduce the following results. In terms of the auditory assessment of the BBC newsreaders from the 1960s, Kenneth Allsop is the only broadcaster whose pronunciation had enough occurrences and hence can be considered to be shifted. However, the incidence of Cliff Michelmore and Derek Hart was 2/4, which is not enough to fulfil the

condition. However, this result cannot be ignored completely since there are some obvious tendencies that the pronunciation of those newsreaders can be at least partially shifted. The Praat analysis in the same era provided different results. In this case, Derek Hart and Kenneth Allsop are the BBC broadcasters whose pronunciation met the preselected criteria and thus can be classified as shifted. On the other hand, Cliff Michelmore did not demonstrate any significant shift. However, Michelmore thus manifests certain tendencies towards a vowel shift in his pronunciation in two of four incidences.

The results of the auditory assessment regarding the contemporary BBC broadcasters proved that all of them have a significant number of words pronounced with a vowel shift in their speech. The data from the Praat analysis confirmed, to a certain extent, the results from the auditory assessment. That is to say, the production of all BBC broadcasters can be indisputably classified as shifted according to the hypothesis.

To sum up, the auditory assessment proved that more contemporary BBC newsreaders used the shifted pronunciation than those from the 1960s. Further, two BBC broadcasters from the 1960s display a clear tendency towards the shifted pronunciation. The analysis done in Praat reviewed similar results. However, some tendencies towards the shifted speech are also visible with respect to Cliff Michelmore, who was the only one who did not manifest any significant vowel shift. As mentioned before, the results from the Praat analysis will have a higher priority. Therefore, it can be stated that the shifted pronunciation is likely to be found in the case of contemporary BBC broadcasters.

Name of the Newsreader	AA - Occurrence	AA - Shift	Praat - Occurrence	Praat - Shift
Cliff Michelmores	0/4	✗	2/4	✗
Derek Hart	1/4	✗	4/4	✓
Kenneth Allsop	0/4	✗	4/4	✓
Ben Boulos	2/4	✗	3/4	✓
James Reynolds	3/4	✓	4/4	✓
Chris Rogers	2/4	✗	4/4	✓

Figure 14 Occurrence of the Vowel Shift from TRAP to [a] Sound

Name of the Newsreader	AA - Occurrence	AA - Shift	Praat - Occurrence	Praat - Shift
Cliff Michelmores	2/4	✗	0/4	✗
Derek Hart	2/4	✗	1/4	✗
Kenneth Allsop	3/4	✓	1/4	✗
Ben Boulos	2/4	✗	3/4	✓
James Reynolds	2/4	✗	1/4	✗
Chris Rogers	4/4	✓	1/4	✗

Figure 15 Occurrence of the Weak Vowel Merger from KIT to LETTER

Name of the Newsreader	AA - Occurrence	AA - Shift	Praat - Occurrence	Praat - Shift
Cliff Michelmores	1/4	✗	0/4	✗
Derek Hart	2/4	✗	1/4	✗
Kenneth Allsop	1/4	✗	0/4	✗
Ben Boulos	3/4	✓	0/4	✗
James Reynolds	2/4	✗	2/4	✗
Chris Rogers	2/4	✗	2/4	✗

Figure 16 Occurrence of the Vowel Shift from KIT to FLEECE



## Conclusion

The aim of the bachelor thesis was to describe, analyse and compare the vocalic articulation of selected vowels presented by BBC newsreaders from the 1960s and the present. The theoretical part provided the main information about RP and its historical background, described the vocalic structure and the three selected phenomena focusing on a vowel shift.

The tools used for the purposes of the thesis were twofold: Praat and auditory assessment. The former served as the main tool, whereas the latter had a supplementary function. In order to determine whether the pronunciation of the BBC newsreaders is shifted, a specific criterion was adopted. If a BBC broadcaster had at least three out of four words shifted, then his pronunciation was classified as shifted.

Two corpora were created and further analysed based on the selected vowel shifts. First, the corpora were analysed separately, and then the results were compared to draw a conclusion with respect to the main research question.

The findings of the analysis revealed that *the TRAP to [a] vowel shift* was clearly detectable in most parts of the analysis, except the auditory assessment in the corpora of the BBC newsreaders from the 1960s, where only Praat confirmed the vowel shift through to the measurement of the formant F1. This can be explained by the bad quality of the recording or an unfinished process of shifting. *The weak vowel merger from KIT to LETTER* sound was audible in the majority of words in terms of the auditory assessment, but only a few of them were detected in the Praat analysis. This was similar for both corpora differing in a greater number of incidences in the Praat analysis of the contemporary BBC broadcasters. *The KIT to FLEECE vowel shift* showed a great disproportion between the auditory assessment and the Praat

measurements in both corpora, which means that the auditory assessment in both cases demonstrated a larger number of incidences of a vocalic shift than Praat.

Due to the disproportion and different results from the auditory assessment and the Praat analysis, it was determined that the Praat analysis would be decisive. Despite this decision, the auditory assessment provided several interesting findings. For instance, the TRAP shift was not audible concerning the BBC newsreaders in most words, but most of them were detected in the Praat analysis.

From the three selected phenomena, the first vowel shift, i.e., from TRAP to [a] sound, was the only one where all selected BBC broadcasters, except Cliff Michelmore, had at least three words shifted, which means that the condition mentioned above, was fulfilled and the vowel could be marked as shifted. In the other two selected vowel shifts, only the pronunciation of Ben Boulos, regarding the weak vowel merger from KIT to LETTER, had the occurrence high enough to be considered to be changed. The pronunciation of the other BBC broadcaster was evaluated as unchanged due to the insufficient number of occurrences needed to fulfil the defined condition.

The main research question was to what extent the development of vocal articulation in RP is reflected in the pronunciation of BBC presenters in the 1960s and today. To answer the research question, the data obtained from the auditory assessment and the Praat analysis proved that all the contemporary BBC broadcasters fulfilled the established criterion, and their pronunciation was shifted at least in one of the selected phenomena. As far as the BBC newsreaders from the 1960s are concerned, the pronunciation of two out of the three broadcasters evinced a sufficient number of occurrences in the Praat analysis. Hence, their pronunciation can be considered to be shifted. On the other hand, in the pronunciation of the last BBC

newsreader, Cliff Michelmore, two words out of four were detected as shifted. To put it differently, there are some apparent tendencies towards a vocalic shift, even though the condition was not met completely.

The bachelor thesis was limited in many aspects. For instance, due to lack of time, the number of BBC newsreaders and phenomena had to be reduced because the analysis and further data processing would require more time to evaluate and interpret them correctly. The age and the place of birth of the BBC broadcaster were also factors that limited this thesis. It was not recommended to choose BBC newsreaders over the age of 50 because the shift might not be clearly provable. It was also preferred to find BBC newsreaders born in England because there was a low probability that any other accent influenced their speech. The quality of the recordings was another factor that played an essential role in the analysis results. Even though the program Audacity was used to eliminate some disturbing noises, this bachelor thesis would require more sophisticated and professional pieces of software. However, these professional programs are not available for free. Therefore, it was necessary to find more suitable words where the shift was easily detectable by the auditory assessment and the Praat analysis. The interpretation of all data was the most challenging step because sometimes it was somewhat complicated to draw a conclusion from the findings of the analysis and interpret them coherently and systematically.

The results gained from the analyses of this thesis can be used by future researchers that would like to build upon the topic and use the data as a basis for further comparison. Moreover, this bachelor thesis points to certain tendencies in terms of a vowel shift in Standard British English that has occurred over the last 50 years, and the shifting process is still in progress. Therefore, it would be interesting

to do similar research in a few years to further examine and map the development of British English.

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# Appendix

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**Appendix A: The Evaluation Sheet - Specimen**

Name of the Newsreader	Selected Words	Auditory Assessment	Praat
Ben Boulos			
James Reynolds			
Chris Rogers			
Cliff Michelmore			
Derek Hart			
Kenneth Allsop			



**Appendix B:** Formants of the Vowels – Ben Boulos

Word	Vowel	F1 (Hz)	F2 (Hz)
emancipation	æ - a	697	1507
Japan		802	1559
overshadowed		888	1596
palace		970	1398
carpet I	ɪ - ə	502	1668
carpet II		563	1659
latest I		415	1890
latest II		769	2116
casualty I	ɪ - i:	436	2317
movie		359	2494
country		382	2330
casualty II		431	2426

**Appendix C: Formants of the Vowels – Chris Rogers**

<b>Word</b>	<b>Vowel</b>	<b>F1 (Hz)</b>	<b>F2 (Hz)</b>
<b>factual I</b>	<b>æ - a</b>	<b>765</b>	1697
<b>ambassador</b>		<b>838</b>	1812
<b>factual II</b>		<b>831</b>	1795
<b>act</b>		<b>1023</b>	1897
<b>biggest</b>	<b>I - ə</b>	<b>552</b>	2230
<b>richest</b>		<b>464</b>	2190
<b>latest I</b>		<b>435</b>	1651
<b>latest II</b>		<b>491</b>	2610
<b>security</b>	<b>I - I:</b>	<b>347</b>	2166
<b>city</b>		<b>731</b>	2432
<b>policy</b>		<b>356</b>	2276
<b>story</b>		<b>387</b>	2095

**Appendix D:** Formants of the Vowels – James Reynolds

Word	Vowel	F1 (Hz)	F2 (Hz)
<b>nationally</b>	<b>æ - a</b>	<b>830</b>	1600
<b>calculate</b>		<b>803</b>	1470
<b>damage</b>		<b>763</b>	1561
<b>graphic</b>		<b>767</b>	1537
<b>latest I</b>	<b>ɪ - ə</b>	<b>407</b>	1902
<b>target</b>		<b>395</b>	2016
<b>latest II</b>		<b>411</b>	1864
<b>highest</b>		<b>646</b>	1880
<b>emergency</b>	<b>ɪ - ɪ:</b>	<b>371</b>	2174
<b>energy I</b>		<b>335</b>	2305
<b>energy II</b>		<b>331</b>	2279
<b>city</b>		<b>395</b>	2258

**Appendix E: Formants of the Vowels – Cliff Michelmore**

<b>Word</b>	<b>Vowel</b>	<b>F1 (Hz)</b>	<b>F2 (Hz)</b>
<b>bad</b>	<b>æ - a</b>	<b>721</b>	1587
<b>snowman</b>		<b>584</b>	1640
<b>cancel</b>		<b>767</b>	1603
<b>match</b>		<b>630</b>	1559
<b>latest I</b>	<b>ɪ - e</b>	<b>413</b>	1815
<b>latest II</b>		<b>375</b>	1644
<b>blanket</b>		<b>425</b>	2011
<b>late</b>		<b>459</b>	1952
<b>January</b>	<b>ɪ - i:</b>	<b>635</b>	1733
<b>story</b>		<b>439</b>	1766
<b>country</b>		<b>479</b>	1668
<b>electricity</b>		<b>415</b>	1926

**Appendix F: Formants of the Vowels – Derek Hart**

Word	Vowel	F1 (Hz)	F2 (Hz)
band	æ - a	1191	2608
matters		915	1613
began		1183	1553
avalanche		756	1585
bullet	ɪ - ə	1129	2219
hundred		793	2109
discovered		410	1497
longest		359	1996
heavily	ɪ - ɪ:	396	2350
twenty		351	2446
country		444	1927
bitterly		428	2132

**Appendix G: Formants of the Vowels – Kenneth Allsop**

<b>Word</b>	<b>Vowel</b>	<b>F1 (Hz)</b>	<b>F2 (Hz)</b>
<b>animals</b>	<b>æ - a</b>	<b>860</b>	1818
<b>gas I</b>		<b>716</b>	1871
<b>channel</b>		<b>890</b>	1748
<b>gas II</b>		<b>698</b>	1906
<b>desperate I</b>	<b>ɪ - ə</b>	<b>440</b>	1367
<b>desperate II</b>		<b>367</b>	2212
<b>hundred</b>		<b>454</b>	1450
<b>desperate III</b>		<b>482</b>	1615
<b>sixty</b>	<b>ɪ - i:</b>	<b>347</b>	2269
<b>history</b>		<b>549</b>	2012
<b>whisky</b>		<b>573</b>	2344
<b>electricity</b>		<b>504</b>	2101

**Appendix H: The Occurrence Evaluation Sheet – Specimen**

Name of the Newsreader	AA - Occurrence	AA - Shift	Praat - Occurrence	Praat - Shift
Cliff Michelmores				
Derek Hart				
Kenneth Allsop				
Ben Boulos				
James Reynolds				
Chris Rogers				