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Reduced Vowels in British English

(bakalářská práce)

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Prohlašuji, že jsem tuto bakalářskou práci vypracoval samostatně a uvedl úplný seznam citované a použité literatury.

V Olomouci dne

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GLOSSARY

RP Received Pronunciation

SBE Standard British English

GAE General American English

KIT, **FLEECE**, **FOOT**, **happY**, **commA**, **lettER** standard lexical sets devised by J. C. Wells (1982)

F1, F2, F3 formant frequencies

LPD Longman Pronunciation Dictionary

EPD An English Pronouncing Dictionary

CV Cardinal Vowel

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1. INTRODUCTION

The thesis has as its goal to explore reduced vowels—mid-central schwa /a/and mid-high front KIT /t/— in Standard British English (RP), with a particular focus on variability and change. As well as providing an assessment of the current situation, it will put things in historical perspective so as to show that (1) there have been two shifts in progress: from KIT to schwa and from KIT to FLEECE, and that (2) the clear separation of reduced vowels into the two categories (schwa and KIT) is a simplification that is no longer tenable and needs revision.

Schwa is very specific in that it occurs only in unstressed syllables. KIT, on the other hand, has no such limitations and appears in stressed syllables as well. In unstressed syllables, /ə/ is said to be in free variation with /ı/. For example, an RP speaker may say either /'ppsəbl/ or /'ppsıbl/ (Wells 2008, 630). Naturally, the question arises which of the variants is used more often, and it must be said that this has been an area of considerable interest to phoneticians in the last 60 or so years, because, as Wells (1997, under "Changes in the mid twentieth century") claims, there has been a progressive shift between the schwa and KIT vowels ever since the middle of the 20th century. As a result of this change, young RP speakers today are much more likely to use schwa instead of KIT in unstressed syllables.

However, it would be wrong to conceive of the situation as mere competition between the two vowels, because there are certain circumstances that need to be taken into account. First, the division of reduced vowels mentioned above is not common to every speaker of RP. Wells (1982, 167) asserts that while Traditional RP, a conservative form of RP, has a clear distinction between words such as *Lennon* and *Lenin*, other, more liberal forms of the standard accent may lack it, having only the schwa version. Wells calls this phenomenon Weak Vowel Merger (1982, 167). Second, some people use still another vowel, which can be symbolized by barred-i (Ladefoged 2006). This vowel has an intermediate quality, as it were: it is central (same as schwa) and high (same as KIT). Finally, in certain prefixes, the FLEECE vowel can occur instead of schwa and KIT (Wells 2008, xiii).

The thesis is intended mainly as a theoretical exploration of reduced vowels. Consequently, most of the space is devoted to the theoretical part, which will focus, in turn, on the general characteristics of the vowels involved, their distribution and variants, as well as accounts dealing with reduced vowels and weak vowel changes. In the practical part, weak vowel changes will be observed on samples of words drawn from two different pronunciation dictionaries, namely the Longman Pronunciation Dictionary (2008) and the English Pronouncing Dictionary (1945). Any patterns will be noted. Moreover, the findings from the theoretical and practical part will then be used as a basis for making suggestions for future research.

2. THEORETICAL PART

2.1. KIT and Schwa: General Characteristics

The sections in 2.1 will be dealing with the ways one can describe KIT and schwa (or any other vowels, for that matter). The very first method employed by phoneticians is based on an articulatory account of vowels. Following this line of inquiry, one can arrive at the answer to the question how vowels are produced. This method has been in use for a very long time, but the focus has gradually shifted to two other approaches that are considered more accurate: auditory and acoustic. The former looks at how people perceive different vowels, while the latter concerns itself with what happens between the moment of utterance and the moment of perception.

2.1.1. Articulatory and Auditory Dimensions

In this section, the aim will be twofold: the KIT and schwa vowels will be considered from an articulatory as well as auditory point of view. First of all, let us have a look at what the articulatory approach encompasses. When describing vowel quality in this way, one can generally make use of the following set of seven features (Ladefoged 2006, 272):

- Height: [high] [mid-high] [mid] [mid-low] [low]
- Backness: [front] [central] [back]
- Lip rounding:
 - Protrusion: [protruded] [retracted]
 - Compression: [compressed] [retracted]
- Tenseness: [tense] [lax]
- Rhotacization: [rhotacized]
- Nasalization: [nasal] [oral]
- ATR: [+ ATR] [– ATR]

Not all of these are used with the same frequency across the languages of the world. Ladefoged (2006, 226) points out that there are two main features that are significant in nearly every one of them-height and backness. English makes use of the other features as well, to a varying degree. Lip rounding is mostly relevant only to back vowels, so it is of little use here because this thesis deals solely with vowels falling into either the front or central category. Since reduced vowels are invariably lax, tenseness is of no great import here either. As for rhotacization, while schwa has an r-colored version /o/ that is used in rhotic accents, RP-a non-rhotic accentdoes not contain it in its vowel repertoire. Speaking of nasalization, English, as opposed to French, does not have nasal vowel phonemes. On the other hand, its vowels may become nasalized "in syllables closed by a nasal consonant" as a result of anticipatory assimilation (Ladefoged 2006, 99). That, however, does not help one distinguish between KIT and schwa, so it is again irrelevant. As far as ATR, or Advanced Tongue Root, is concerned, "no pairs of vowels are distinguished simply by this tongue gesture" (Ladefoged 2006, 224). Consequently, the focus of the next few paragraphs will be solely on the height and backness features.

First of all, it is imperative that a specification of the two terms be furnished. The need for such a step stems from a certain divide in usage. On the one hand, there is an articulatory account of height (openness) and backness, propounded chiefly by Daniel Jones; on the other, there is an alternative, auditory account, one of whose adherents was Peter Ladefoged. The former takes the view that the two terms describe the position of the highest point of the tongue (Jones 1964, 37–38), while the latter claims that such a specification of vowels is not very satisfactory, and rather subscribes to the notion that the terms are "simply labels that describe how vowels sound in relation to one another" (Ladefoged 2006, 85).

No matter which view one takes, it is indubitably convenient to have a certain model that illustrates the concepts. Daniel Jones created such a model. It is commonly known as vowel chart and serves to show the relative positions of the highest point of the tongue. Since the focus here is almost exclusively on the KIT and schwa vowels, all the other vowels have been left out from the following chart to make it easier to see how the two vowels are positioned relative to each other.

Figure 1. Relative positions of KIT and schwa.



As can be seen, they are different in both aspects under consideration (height and backness). Schwa is right in the middle of the chart, while KIT is to the left and higher up. In Jones's terminology, that means that the highest point of the tongue is higher and more forward when one is pronouncing /I/. While Ladefoged uses such a vowel chart too, he no longer refers to tongue positions; rather, he talks about auditory qualities (Ladefoged 2006, 86). Accordingly, one may say that schwa has the auditory qualities central and mid, whereas KIT has front and mid-high.

It was not only the vowel chart that Daniel Jones introduced in this area: he also devised a set of fixed reference points—cardinal vowels—that help to describe other vowels. The two cases being considered, however, cannot be compared in this way because schwa is not defined in reference to cardinal vowels. It is merely vaguely characterized as a "range of mid-central vowels" (Ladefoged 2006, 216). KIT, on the other hand, may be specified as a centralized, raised CV2 /e/ (Cruttenden 2001, 92).

While the vowel chart may be a convenient illustrative model, it has also some weaknesses. One that is particularly relevant to the topic pertains to its inflexibility. In the chart, the vowels are neatly separated by space, looking as if they were pronounced the same way all the time by everybody. However, vowels are not isolated elements, as the chart might wrongly suggest; rather, it is much more precise to assert that all "vowel sounds form a continuum" (Ladefoged 2006, 85). The boundaries between vowels are at best blurred. Consequently, the distinction between schwa and KIT may not always be so easy to spot.

In summary, in this section, a brief articulatory/auditory outline of the relevant vowels has been produced, with a particular focus on two salient features height and backness. In the process, the concepts of vowel chart and cardinal vowels have been introduced as tools that have long been used to describe vowels. Differences between the auditory and the articulatory account have been pointed out to make it clear what is meant when someone says that KIT is a mid-high vowel, for example. The results of this survey are laid out in Table 1, together with two additional features that are commonly used to describe English vowels (Roundedness and Tenseness), but that have no distinguishing power in this case.

VOWEL	TRANSCRIPTION	TENSENESS	HEIGHT	BACKNESS	Roundedness
KIT	/I/	lax	mid-high	front	unrounded
SCHWA	/ə/	lax	mid	central	unrounded

Table 1. Basic characteristics of KIT and schwa.

2.1.2. Acoustic Dimension

So far, the KIT and schwa vowels have been considered from an articulatory and auditory perspective. It has been pointed out that it is possible to think of them in terms of either the position of the highest point of the tongue or auditory impressions. However, sounds are not only articulated on the part of the speaker and perceived on the part of the listener, they also move across the intervening medium in the form of waves, and these waves can be used as the source of acoustic data for analysis.

In terms of acoustics, sounds can be identified with the help of so-called formants (resonating frequencies of the vocal tract), which are displayed in the spectrogram. The first three—F1, F2, and F3—are sufficient to distinguish between individual vowels in English. In fact, in practice, the last one is often omitted because only F1 and F2 are really necessary for the purpose. The formants more or less correspond to particular articulatory features: F1 is inversely related to vowel height, F2 is related to vowel backness but is also influenced by lip rounding, and F3 reflects lip rounding.

The reality is, however, much more complex than that. It is necessary to bear in mind the fact that there are individual differences between speakers. Even when every one of them pronounces the same vowel, the absolute values of formant frequencies will be different. That can be ascribed to differences in sex, age, head size, etc. Another problem lies in the fact that vowels are usually not pronounced on their own; rather, they are part of connected speech. Consequently, their formant frequencies are influenced by the surrounding sounds. That is especially the case with schwa, which is very variable because of coarticulatory effects (Nord 1986, 34). Heselwood (2007, 156) reinforces the point by saying that "schwa is the vowel most susceptible to contextual influences both spectrally and temporally, and the least likely vowel to exert influences on other sounds."

Ladefoged (2006, 182) states that schwa has approximately the following formant values: F1 = 500 Hz, F2 = 1500 Hz, and F3 = 2500 Hz. There are a few points to be aware of. This idealization assumes that schwa is produced with a neutral vocal tract, but that is not necessarily the case. Also, it assumes that the speaker is a male with an average-sized vocal tract. Finally, the numbers can never capture the different contextual influences that may have an impact on the schwa vowel. Thus, while the formant frequencies presented here may be seen by some as a good enough approximation, their value for further application in research is questionable at best for the reasons stated above.

There have been several studies that have looked at the formants of vowels in Standard British English/RP (Wells 1962; Deterding 1997; Hawkins and Midgley 2005; Ferragne and Pellegrino 2010), but none of those have included the schwa vowel. On the other hand, KIT has been included in all of them, which is why it is possible now to present some of the average values that have been arrived at. Let us take a look at Table 2 on the following page.

	AGE	Gender	CONNECTED SPEECH/ CITATION FORMS	MEAN F1 (HZ)	MEAN F2 (Hz)	MEAN F3 (HZ)
Wells (1962)				356	2098	2696
		Male	Connected	367	1757	
Deterding		Male	Citation	382	1958	—
(1997)		Female	Connected	384	2174	—
			Temale	Citation	432	2296
Hawkins	20–25			393	2174	
&	35–40			374	2115	
Midgley	50–55			341	2074	
(2005)	(2005) 65+		382	2024		
Ferragne & & Pellegrino (2010)				386	2038	

Table 2. Average formant frequencies for the KIT vowel in SBE (or RP).

Looking at Table 2, one can observe a few general points:

- 1. On average, female formant frequencies are higher than their male counterparts.
- 2. Citation forms of KIT have, on balance, higher F1 and F2 than instances of KIT in connected speech.
- 3. Age does not seem to be much of a factor here.
- Average F1 ranges from 341 to 432 Hz. Average F2 ranges from 1757 to 2296 Hz. The data show that F2 is particularly variable.

To sum up, in this section, the concept of acoustic analysis has been introduced. This method provides one with quantitative data in the form of formants. The first three play a major role in helping to decide which vowel has been uttered. In spite of all the valuable information and evidence that this technique provides, it must be emphasized that even acoustic analyses are not without their drawbacks. Data gained from such experiments can be influenced by gender, vocal tract size, and other factors. These may lead to sharp differences in the final results. Several studies of monophthongs of RP (or SBE) have been presented, but not one of them has included schwa as one of the observed vowels. On the one hand, it is understandable because schwa is considered to be so variable that it is not entirely feasible to make any definitive conclusions about it. On the other, there are studies of the schwa vowel in American English (for example, Flemming and Johnson 2007), so there is no reason not to conduct such research for the RP accent.

2.2. Distribution and Variants of Schwa and KIT

2.2.1. Schwa and KIT in Stressed and Unstressed Syllables

In Figure 2, one can see a diagram illustrating different degrees of prominence of syllables in a sentence (Ladefoged 2006, 113).

Figure 2. Degrees of prominence of syllables in a sentence.



Syllables are divided into two major groups: stressed and unstressed. Stressed syllables may have a word stress only or both a word stress and a tonic stress (accent) at once. Unstressed syllables do not have any stress at all, but that does not automatically mean that the vowels in them are reduced. They may be or may not be.

Vowels can also be divided into two major groups: full (unreduced, strong) and reduced (weak). Full vowels maintain their full quality, whereas reduced do not. There is a crosslinguistic tendency to have fewer vowel oppositions in unstressed syllables than in stressed (Nord 1986, 19–20). That is, the number of vowels that comprise the "strong" group is greater that the number comprising the "weak" group. In general, strong (full) vowels may appear both in stressed syllables and in unstressed syllables, while weak (reduced) vowels occur only in unstressed syllables.

Schwa—the most commonly occurring vowel in RP (Cruttenden 2001, 148)—is invariably categorized as a reduced vowel. It is permitted to appear only in unstressed syllables (Cruttenden 2001, 93). KIT differs from schwa in that it is not

limited solely to unstressed syllables. Since it may occur in a stressed syllable too, it follows that KIT can be categorized as a full vowel. However, the fact that KIT may appear in unstressed syllables does not prove that it is, in fact, a reduced vowel, because full vowels can also appear in this environment. To test the proposition that KIT can be a reduced vowel, one can utilize a few methods (Wells 2011b). Let us consider one of them. For this particular method to work, one has to switch to General American English (GAE). One of the features of this variety is so-called tapping (or flapping). This phonological process requires that a vowel following an alveolar stop within a morpheme be weak (reduced). There are exceptions to the rule, but let us put them aside because they are not relevant in this case. When the vowel in question is weak, the stop changes into a tap (flap). To illustrate, a word such as waiting can be transcribed in narrow IPA as ['weirin]. The broad IPA counterpart would be /'weitin/. It is apparent that alveolar stop /t/ has become alveolar tap [r]. That is possible because the following vowel is weak, and that vowel is KIT. Thus, it has been proved that KIT is a strong as well as weak vowel. Which of the two applies depends on the circumstances of any given case. If KIT occurs in a stressed syllable, one can be sure that it is an example of KIT as a full (strong) vowel. By contrast, in an unstressed syllable, it can be an example of a reduced (weak) as well as full (strong) vowel.

To sum up, KIT and schwa differ as regards distribution in stressed and unstressed syllables: while KIT can occur in either, schwa is limited to unstressed syllables. All the conclusions are summarized in Table 3.

VOWEL	CLASSIFICATION	SYLLABLE	EXAMPLE	TRANSCRIPTION
SCHWA	Reduced (Weak)	Unstressed	effect	/əˈfekt/
	E-11 (Stars	Stressed	bit	/bɪt/
KIT	Full (Strong)	Unstressed	playlist	/'pleɪlɪst/
	Reduced (Weak)	Unstressed	effect	/ıˈfekt/

Table 3. Distribution of schwa and KIT: stressed and unstressed syllables.

2.2.2. Occurrence of Schwa and KIT in Words

In RP, both schwa and KIT may be found in all basic positions in a word that is, initially, medially, and finally. However, this statement requires a qualification. While the occurrence of schwa and KIT in word-initial and -medial positions is uncontroversial, the same can hardly be said of the occurrence of KIT in word-final position. Nowadays this option is rather marked and possible only in a certain subgroup of English speakers. This group comprises mostly people speaking Traditional RP. In this conservative form of the standard British accent, one can still encounter pronunciations such as /'hæpɪ/ and /'lʌkɪ/ that make use of the KIT vowel rather than the more commonly used tense counterpart /i/. Wells (1982, 258) calls this shift from the lax vowel /ɪ/ to the tense vowel /i/ in the word-final context HappY Tensing. The resultant vowel should not be thought of as a full-fledged FLEECE vowel, though; rather, it is better to talk of an intermediate vowel between KIT and FLEECE. It is quite short (same as KIT) and tense (same as FLEECE).

The one qualification aside, KIT and schwa can occur freely in various positions in a word. When used as reduced vowels, they are often interchangeable. In Tables 4 and 5, there are various correspondences between sound and orthography for schwa and KIT.

Orthography	EXAMPLES	TRANSCRIPTION
a	a , a long, moder a te	/ə/, / əˈlɒŋ/, /ˈmɒdərət/
ar	p ar ticular, forw ar d	/pəˈtɪkjʊlə/, /ˈfɔːwəd/
e	the, effect, return	/ðə/, /əˈfekt/, /rəˈtɜːn/
er	mod er n, sob er	/ˈmɒdən/, /ˈsəʊbə/
eig	for eig n, sover eig n	/ˈfɒrən/, /ˈsɒvrən/
i	horrible, visible	/ˈhɒrəbl/, /ˈvɪzəbl/
0	method, protect	/ˈmeθəd/, /prəˈtekt/
or	effort, actor	/'efət/, /'æktə/
ou	fam ou s, hazard ou s	/ˈfeɪməs/, /ˈhæzədəs/

Table 4. Schwa: correspondence between spelling and pronunciation.

oar	cupb oar d, starb oar d	/ˈkʌbəd/, /ˈstaːbəd/
our	col our , hum our	/ˈkʌlə/, /ˈhjuːmə/
u	chor u s, minim u m	/ˈkɔːrəs/, /ˈmɪnɪməm/
ure	fig ure , feat ure	/'figə/, /'fiːtʃə/

Table 5. KIT (weak, reduced): correspondence between spelling and pronunciation.

ORTHOGRAPHY	EXAMPLES	TRANSCRIPTION
a	moderate, climate	/'mɒdərɪt/, /'klaımɪt/
e	effect, return	/ I 'fekt/, /r I 't3ːn/
eig	for eig n, sover eig n	/ˈfɒrɪn/, /ˈsɒvrɪn/
i	horrible, visible	/ˈhɒrɪbl/, /ˈvɪzɪbl/

It is clear from Tables 4 and 5 that the weak KIT and schwa are similar in some cases. When one looks at what letters or sequences of letters these sounds correspond to, it becomes apparent that KIT has fewer such correspondences than schwa. That reflects the fact that the latter is the most commonly occurring vowel in RP. While one may say either /'mpdərɪt/ or /'mpdərət/, one cannot say, for example, /'feɪmɪs/. Only the version with schwa is correct. That is, sometimes KIT is in free variation with schwa, as in the case of the word *moderate*; at other times, it is not. In terms of orthography, schwa and KIT may both correspond to the following letters or sequences of letters: *a*, *e*, *eig*, *i*. As can be seen in Table 4, schwa has at least nine other possibilities in addition to the four mentioned.

While certainly interesting, such data as presented in Tables 4 and 5 do not provide the whole picture, which is why more information needs to be supplied. Table 6 provides an overview of the contexts in which the vowels in question can both occur and are in free variation.

Orthography	POSITION	PART OF	EXAMPLE	
	word-internal	suffix -ate	moderate	
а		suffix -ace	neckl ace	
		suffix -age	man age	
		prefix <i>e</i> -	effect	
е	word-initial	prefix <i>en</i> -	en tangle	
		prefix <i>em</i> -	employ	
		prefix <i>be</i> -	begotten	
		prefix <i>de</i> -	develop	
e	word-internal	prefix pre-	prevent	
		prefix <i>re</i> -	return	
		pr	prefix se-	select
	word-internal		suffix <i>-less</i>	self less
0		suffix <i>-ness</i>	good ness	
e		suffix - e d	wait ed	
		suffix <i>-es</i>	watches	
eig	word-internal		for eig n	
		suffix - <i>ible</i>	horr ible	
i	word-internal	suffix - <i>ity</i>	visibil ity	
1	word-internat	suffix - <i>ily</i>	happ ily	
		suffix - <i>itive</i>	pos itive	

Table 6. KIT and schwa: free variation.

2.2.3. Variants of Schwa and KIT

Cruttenden (2001, 127) posits that schwa is very variable and may appear in three basic variants. The following list and chart illustrate the triad:

- 1. In most non-final positions, the quality closely resembles the prototypical schwa that is placed in the center of the vowel chart.
- 2. When adjacent to the velar consonants /k, g, ŋ/, however, schwa is slightly raised and retracted.
- 3. In final positions, schwa tends to be lower—in fact, so much so that it may approximate to the mid-low central vowel $/\Lambda/$.





Similarly, KIT is subject to variation. Cruttenden (2001, 107) argues that the "closeness and centralization [of this vowel] varies according to the accentual force falling upon the vowel and its position in the word." He demonstrates this theory using the word *visibility* as an example. The word has a primary as well as secondary stress, with the former falling on the third syllable and the latter on the first. Cruttenden (2001, 107) claims that the vowels in these stressed syllables closely resemble the prototypical KIT from the vowel chart, while the vowels in the unstressed—second and fourth—syllables are more centralized.

Figure 4. Variants of KIT.



2.3. Reduction and Reduced Vowels

2.3.1. Vowel Reduction

Vowel reduction may be defined in various ways. Kondo (1994, 64), for instance, states that there are two possible perspectives: a broad and narrow one. In a broad sense, vowel reduction can be defined as "phonological or phonetic processes by which vowels become less prominent or weakened in quality and/or quantity" (Kondo 1994, 64). In a narrow sense, it is "a phonological process by which a *full* vowel approaches or becomes a *reduced* vowel in *weakly* or *un*-stressed syllables in so-called *stress-timed* languages" (Kondo 1994, 64).

Van Bergem (1991, 10:1) distinguishes between lexical and acoustic vowel reduction. The former is "the substitution of one vowel by another that is easier to pronounce" (Van Bergem 1991, 10:1). The latter refers to "a loss of vowel quality due to a relaxed articulation in less informative parts of an utterance" (Van Bergem 1991, 10:1). Lexical reduction can be thought of as an extension of acoustic reduction.

Traditionally, vowel reduction has been seen as centralization (Kondo 1994, 63), and schwa—the most common product of this process—has been viewed as a vowel right in the center of the vowel space. However, Nord (1986, 22) argues that the situation is much more complicated than that, as there are two principles in conflict with each other: a tendency of reduced vowels to move toward a neutral position in the vowel space (that is, toward the center) and a tendency of unstressed phonemes to coarticulate more strongly with their context. Nord (1986, 34) further claims that the position of a given vowel within a word determines which of the tendencies will prevail. In non-final syllable position, the vowel coarticulates with its context. In final syllable position, it moves toward a neutral position in the center of the vowel space. Lindblom (1963, 5) asserts that "in the acoustic domain a reduced vowel is located somewhere along a continuum whose extreme ends are the formant pattern of the unaffected vowel and that of the neutral vowel or schwa." That goes to show that the concept of a reduced vowel is very flexible and allows for a great deal of variability.

2.3.2. Reduced Vowels

Cruttenden (2001, 147) states that there are three different reduced vowels in RP: /ə/, /1/, and /v/. The default reduced vowel that is used across all English accents is schwa /ə/. The other two, by contrast, are not so widely used. Heselwood (2007, 155) claims that "they do not reduce as much as does schwa, a difference that may be linked to the fact that they also occur in accented syllables." KIT /1/ as employed in unstressed syllables is one of them. The other one, which is not always mentioned, is a version of the FOOT vowel /v/ that is used, for example, in the word *into* /' into/ or *playful* /' pleifol/. What is striking about this FOOT vowel is the fact that it can usually be reduced further to schwa /' pleifəl/, and sometimes even fully dropped and replaced by a syllabic consonant. Moreover, not all speakers make use of it. That is why this vowel is not going to be studied in any more detail.

In this section, the most attention will be paid to schwa. Not only is it the most frequent vowel there is, but it is also the most elusive one, so to speak, because its precise quality cannot be easily determined. In 2.1.1, an idealized version of this vowel has been described as a mid-central vowel. Later it has been suggested that it is much better to conceive of schwa as a range of possible qualities, rather than one single quality, somewhere around the middle of the vowel space. As a reduced vowel, it tends to be shorter than other vowels. In many cases, schwa is not even considered necessary and is dropped altogether. Heselwood (2007, 154) says that there is "[n]o other vowel [that] can be omitted so widely and freely without potentially affecting lexical identity." Take, for example, words such as *little* and *kitten*. Although it is possible to include schwa in such words, the version without the vowel—and with a syllabic [l] or [n] respectively—is the recommended one (Wells 2008, 799). The alternatives with schwa are merely optional. Full vowels are usually much harder to delete than schwa.

Heselwood (2007, 153) argues that one of the factors that contribute to the high frequency of schwa in modern English is so-called weak forms. That is, schwa is said to be particularly common in the weak forms of frequently used words. Some examples of such words are illustrated in Table 7. As can be seen, they include grammatical items, such as prepositions, conjunctions, articles, pronouns, and auxiliary verbs.

Words	STRONG FORMS	WEAK FORMS
а	/eɪ/	/ə/
am	/æm/	/əm/
and	/ænd/	/ənd/ /ən/
as	/æz/	/əz/
at	/æt/	/ət/
but	/bʌt/	/bət/
can	/kæn/	/kən/
could	/kʊd/	/kəd/
does	/dʌz/	/dəz/
for	/fɔ:/	/fə/
from	/from/	/frəm/
has	/hæz/	/həz/ /əz/
must	/mʌst/	/məst/ /məs/
of	/ɒv/	/əv/ /ə/
should	/ʃʊd/	/ʃəd/
some	/sam/	/səm/
than	/ðæn/	/ðən/
that	/ðæt/	/ðət/
to	/tu:/	/tə/
us	/\\\\\/\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	/əs/
was	/wpz/	/wəz/
were	/w3:/	/wə/
would	/wod/	/wəd/ /əd/

Table 7. Schwa in the weak forms of frequently used words.

Apart from grammatical words, schwa can also occur in a whole range of environments in lexical (content) words. It may appear word-initially, wordinternally, as well as word-finally. What is common to all of these is the fact that the necessary precondition for schwa to appear is the context of an unstressed syllable. There are other factors apart from word class, frequency of use, and stress that may contribute to vowel reduction and use of schwa: speech tempo and style, for example. It is often assumed that the faster (or sloppier) one talks, the more likely one is to use reduced vowels.

Wells (1982, 165–167) uses two different standard lexical sets for schwa in RP: commA and lettER. These refer specifically to word-final vowels. There is relatively little difference between them in RP because RP is a non-rhotic accent. Both vowels are usually transcribed in the same way: /ə/. However, there is a qualification to this statement that needs to be made: when the lettER vowel appears before a word or suffix beginning with a vowel, linking /r/ is used. Thus, one would transcribe the word *letter* as /'letə/ and the word *lettering* as /'letərıŋ/. In the former, the *-er* sequence corresponds to *schwa only*: /ə/. In the latter, though, it corresponds to the sequence *schwa* + *r*: /ər/. In GAE, a rhotic accent, a rhotacized version of schwa /ə/ would be used for words from the lettER set (for example, /'letə/), and a standard schwa for words from the commA set (for example, /'kɑ:mə/).

In Table 8, an overview is provided of the various correspondences between sound and spelling in the lettER lexical set in the RP accent. A single sound (schwa) can be represented in writing in seven different ways. For the sake of comparison, let us also have a look at the second lexical set, commA. As can be seen in Table 9, things are much simpler here: one sound (schwa) and only two spelling variants.

Orthography	Words	TRANSCRIPTION
	bett er	/ˈbetə/
er	ladd er	/ˈlædə/
re	met re	/ˈmiːtə/

 Table 8. Standard lexical set LettER in RP.

	cent re	/ˈsentə/
	auth or	/ˈɔːθə/
or	mot or	/ˈməʊtə/
	sug ar	/ˈʃʊɡə/
ar	vulg ar	/ˈvʌlgə/
	mart yr	/'ma:tə/
yr	sat yr	/ˈsætə/
0.00	hum our	/ˈhjuːmə/
our	rig our	/ˈrɪɡə/
ure	feat ure	/'fi:tʃə/
	measure	/'meʒə/

Table 9. Standard lexical set CommA in RP.

Orthography	WORDS	TRANSCRIPTION
	sof a	/ˈsəʊfə/
a	aren a	/əˈriːnə/
ough	bor ough	/'bʌrə/
	thor ough	/'θʌrə/

As has been mentioned, these lexical sets relate to word-final schwas in RP, but schwa can appear in other positions in a word as well. While it may seem tempting to apply these labels even to such cases, there are certain facts that need to be taken into account here. Such usage may well be considered misleading, in the same way as it is considered misleading to transcribe every single reduced vowel by one single symbol.

Even though the present thesis deals with RP, there are some valuable facts to be gained from research into reduced vowels in American English. Flemming and Johnson (2007, 83) have come to the conclusion that there is a "fundamental distinction between the mid-central [ə] vowel that can occur in unstressed word-final position (e.g. in Rosa), and high reduced vowels that occur in most other unstressed positions, and might be transcribed as [i]." If the same principle applies in RP as well, then there is no way one can consider words belonging to the commA set to be representative of the cases where a reduced vowel is word-internal. According to this theory, schwa is often employed in transcriptions in ways that do not reflect reality. Flemming and Johnson (2007, 83) claim that "the widespread use of [ə] to transcribe word-internal reduced vowels is misleading – mid reduced vowels are generally only found in stem-final position."

The question now remains whether the symbol of barred i employed by Flemming and Johnson (2007) is applicable to RP as well, or whether it is better to transcribe the relevant sound with the symbol for KIT. Ladefoged (2006, 95) does not provide a clear answer to this question. He mentions that accents vary in this regard. Some use schwa, others use KIT, and still others a sound symbolized by barred i. What is clear, though, is the fact that most pronunciation dictionaries do not employ the symbol of barred i in their transcriptions, which may very well be seen as an unwillingness on the side of their authors to complicate the already complicated system even further when there is no sufficient reason for it. KIT and barred i are, in fact, very similar in their features. They are both (mid-)high, but they differ slightly in their degree of backness. KIT is a centralized front vowel, while barred i is a central vowel.

While schwa in word-final position is relatively stable, the quality of a reduced vowel in other positions is variable. Wells (1982, 167) claims that conservative accents, Traditional RP included, are more likely to keep the two major reduced vowels—schwa and KIT—distinct. On the other hand, progressive accents (progressive forms of RP included) tend to neutralize any distinctions between these vowels. He calls this change the Weak Vowel Merger (Wells 1982, 167).

2.4. Weak Vowel Change

RP is a living organism, as it were, and it is being continuously shaped by people who speak it. Those people today come from various backgrounds as well as locations, and this huge diversity brings a great deal of change in its train. RP is still perceived as something that distinguishes people of higher social status and greater educational attainment from those who cannot boast any such attributes, but it is no longer such a rigid model as it used to be. The seemingly inflexible construct has lost much of its former rigidity as a result of a profound influence that non-standard accents have exerted on it.

Some of the changes that the RP accent has been undergoing have to do with weak vowels. This thesis focuses on two such changes: KIT-schwa shift and HappY Tensing. Both of these are based on the notion that one vowel quality gradually gives way to another. Wells (1997) takes the view that the KIT-schwa shift has been in progress for longer than the HappY Tensing. Both are now considered very well-established, but neither of them is complete yet (Cruttenden 2001, 82).

Every time people are faced with a choice, they want to know which of the options is better. However, there is no better or worse option here. The vowels in question, in fact, coexist. Which of them is utilized by a particular speaker depends on various factors, or socio-geographic considerations. First, accent plays an important role. RP speakers use the schwa and KIT vowels in unstressed syllables in certain non-word-final positions, whereas their Australian counterparts have no choice but to use schwa in the same contexts (Cruttenden 2001, 90). Second, age is of major importance. When one focuses firmly on RP, it is possible to observe some age-related differences between speakers. The very general patterns that exist in RP are as follows: KIT-schwa shift is "becoming increasingly noticeable among RP speakers of the middle and younger generations" (Cruttenden 2001, 107), and HappY Tensing is prevalent among "the younger people" (Cruttenden 2001, 66). Basically, it is possible to talk about differences between what may be called Traditional and Modern RP.

What should be borne in mind, though, is that the stated observations are merely general patterns, and as is always the case with generalizations, they leave a great deal of room for variability. Indeed, it would be wrong to suppose that there are two separate categories of speakers—the conservative "across-the-board KIT users" and the progressive "schwa-and-happY users"—that are mutually exclusive, because that would be simplifying the whole issue too much. Consider, for instance, the fact that some older people may well want to try to change their pronunciation so as to sound more modern. As a result, they would fall into the progressive group of speakers. However, their age would suggest otherwise. It is quite clear from this example that due caution should be exercised in applying these terms in practice.

2.4.1. HappY Tensing

Wells (2008, 539) states, "The opposition between i: and I operates in most environments, as seen in **green** gri:n and **grin** grin, **leap** li:p and **lip** lip." He then goes on to say that this opposition may be neutralized in certain contexts—for example, in weak vowels at the end of a word (or at the end of part of a compound word or of a stem), as in *happy* /'hæpi/. The process whereby the final vowel of a word such as *happy* becomes tense is termed HappY Tensing.

However, it is not fully precise to talk about this change as a shift from a lax to a tense vowel, because such a statement does not fully reflect what has been happening in real life. It is true that KIT may become FLEECE in some speakers, but it is much more common to see a vowel of an intermediate quality employed instead (Fabricius 2002, 232). The amorphous character of the vowel in question is further exemplified in Wells (2008, 539): "[T]he vowel is traditionally identified with I. But in fact some speakers use I, some use i:, some use something intermediate or indeterminate, and some fluctuate between the two possibilities. Modern pronunciation dictionaries use the symbol **i**, which reflects this."

The symbol /i/ was introduced in 1978 by the then pronunciation editor of the Longman Dictionary of Contemporary English, Gordon Walsh, "with the explanation that it was to be interpreted as either /i:/ or /I/ according to whether the user was adopting a British or an American model of pronunciation" (Windsor Lewis n.d., under "Vowels"). However, as Windsor Lewis (n.d., under "Vowels") puts it, it was rather a convenient way of recognizing the fact "that most speakers of minimally regionalisable English of England had come to aim at a quality for their final unstressed happy vowel which was too close to be associated with their /I/ value." Other dictionaries, Wells's LPD included, have gradually followed suit, using as

many as three different symbols in their transcriptions: /I/ for KIT, /i:/ for FLEECE, and /i/ for happY.

It has already been mentioned parenthetically that Wells does not limit the use of the symbol /i/ only to cases such as *happy*, where the vowel of interest is the word-final one. He also employs the very same symbol when transcribing words such as (1) *believe*, (2) *curious*, (3) *multimedia*, and (4) *varies* and *varied*. To be more precise, he also uses it (1) when transcribing certain prefixes (*be-*, *de-*, *e-*, *pre-*, *re-*), (2) before vowels, (3) at the end of some combining forms, and (4) in inflected forms where /z/ or /d/ is added to a stem ending in /i/.

It should be noted that cases exemplified by (1) are relative newcomers to this category, as evidenced by Wells (2008, xiii). They have traditionally been pronounced with KIT. However, speakers may also use FLEECE or any of the intermediate qualities. Schwa is possible too. All the options mentioned are interchangeable in this context. That represents a substantial change from the earlier examples. Schwa can occur word-finally but is not in free variation with /1/, /i:/, or /i/ in words such as *happy*.

In Table 10, prototypical examples of HappY Tensing are illustrated.

Orthography	Examples	TRADITIONAL RP	MODERN RP
	happ y	/'hæpɪ/	/'hæpi/
У	ready	/'redɪ/	/'redi/
•.	movie	/'muːvɪ/	/'muːvi/
ie	sort ie	/ˈsɔːrtɪ/	/ˈsɔːrti/
	taxi	/ˈtæksɪ/	/'tæksi/
i	chilli	/'tʃɪlɪ/	/'t∫īli/
	coffee	/ˈkɒfɪ/	/'kpfi/
ee	committ ee	/kəˈmɪtɪ/	/kəˈmɪti/
	vall ey	/ˈvælɪ/	/'væli/
ey	gall ey	/ˈgælɪ/	/'gæli/

Table 10. Prototypical examples of HappY Tensing.

00	Chels ea /'tʃelsɪ/	/'tʃelsi/	
ea	Swans ea	/'swɒnzɪ/	/'swɒnzi/

Category (4) is easily derivable from (some of) the prototypical cases. For example, *varies* and *varied* are created by taking the word *vary*, which ends in /i/, and adding respective inflections. In category (3), a combination of two forms (e.g. multi + media) gives rise to a new word. Again the form *multi* ends in /i/, and the same is true about the resultant word. Category (2) illustrates HappY Tensing in prevocalic positions. Last but not least, in category (1), prefixes come into play. They may end in /i/ or may not. Examples of the individual groups can be seen in Table 11.

CATEGORY	EXAMPLES	TRADITIONAL RP	MODERN RP
	believe	/bɪˈliːv/	/biˈliːv/ /bəˈliːv/
	d e lay	/dɪˈleɪ/	/diˈleɪ/ /dəˈleɪ/
1	elicit	/ɪˈlɪsɪt/	/iˈlɪsɪt/ /əˈlɪsɪt/
	precede	/prɪˈsiːd/	/priˈsiːd/ /prəˈsiːd/
	relieve	/rɪˈliːv/	/riˈliːv/ /rəˈliːv/
2	curious	/ˈkjʊərɪəs/	/ˈkjʊəriəs/
2	ratio	/ˈreɪʃɪəʊ/	/ˈreɪʃiəʊ/
2	multilateral	/ˈmʌltɪˈlætərəl/	/ˌmʌltiˈlætərəl/
3	polyglot	/'ppliglpt/	/'ppliglpt/
	varies	/'veərız/	/'veəriz/
4	varied	/'veərɪd/	/'veərid/
	monies	/'mʌnɪz/	/'mʌniz/
	monied	/ˈmʌnɪd/	/'mʌnid/

 Table 11. Additional cases of HappY Tensing.

While categories (2), (3), and (4) are relatively uncontroversial, the first one is not. It stems partly from the fact that it is new, and partly from the fact that it may seem to be slightly ambiguous. Not only does one single symbol (/i/) stand for at least two others (/I/ and /i:/), but it complicates the whole situation by recognizing that other vowel qualities than KIT and schwa can be used in similar contexts. What is particularly intriguing about it is the fact that the FLEECE vowel was marked as non-RP in the 1st and 2nd edition of LPD, but there is no such warning in the 3rd. Moreover, while such transcriptions help to save valuable space, they do not tell one which version is predominantly used, if any.

Since it has been established that members of category (1) may present many a problem, it is imperative that further investigation be conducted. First of all, there is the question why words such as *descent* and *dissent* are transcribed differently when they are homophonous for many people. Wells (2010a) claims that it has to do with their morphological structure (open vs. closed syllable). The word *descent* is composed of the prefix *de*- (open syllable) and the stem *scent*. That is why he transcribes the word as /di'sent/, or alternatively /də'sent/. *Dissent*, on the other hand, is composed of the prefix *dis*- (closed syllable) and the stem *sent*, which is why the word is transcribed as /di'sent/, or alternatively /də'sent/. The difference lies in the fact that *descent* may be pronounced with FLEECE, and *dissent* cannot. Apart from that, however, they are much the same as far as pronunciation is concerned.

Other prefixes (*be-*, *pre-*, *re-*) are also open syllables. Thus, /i/ is employed in them as well. On the other hand, there are cases where this tentative rule does not apply. Wells (2010a) claims that the current status of the prefixes *se-* and *e-* is particularly unclear. He has chosen not to use /i/ in transcriptions of words beginning with the prefix *se-*. Consequently, the word *select* is transcribed as either /sə'lekt/ or /sı'lekt/, but not /si'lekt/. As for the prefix *e-*, Wells (2011a) says that he was not sure whether to include these *e-*words, but he decided to do so. Apart from the words with the prefix, he also changed transcriptions for some of the words beginning with *e* where *e* was not, in fact, a prefix (for example, *eleven* /i'levn/). He explains the inclusion of the word *eleven* by saying that "the decision for each particular word must depend not on etymology but on whether there appear to be people who use the tenser vowel" (Wells 2011a). The word *event*, on the other hand, is not transcribed as 'i'vent/. These seem to be somewhat arbitrary decisions.

The prefixes se- and e- are not the only problematic areas, though. The prefixes de-, pre-, and re- are no less troublesome. Wells (2010c) summarizes the complexities of the pronunciation of re- as follows:

1. When *re*- has a specific meaning ("again"), it is stressed and pronounced /ri:/.

Example: reconsider / ri:kənˈsɪdə/.

 When *re*- has a vaguer meaning, it is unstressed and usually gets weakened to /ri/ or /rə/.

Example: remember /ri'membə/ or /rə'membə/.

3. However, if the sound immediately after the *re*- is a vowel, then the pronunciation is /ri/.

Example: react /ri'ækt/.

 If *re*- has a vague meaning, is stressed, and followed by a consonant, then it is pronounced /re/.

Example: *relative* /'relativ/.

- If the main stress is on the syllable after the syllable after the prefix *re-*, there is normally secondary stress on the *re-*. It is pronounced /re/. Example: *recommend* / rekə mend/.
- Some words are irregular and exceptional. They are pronounced in a way that violates the preceding rules.

Example: *relaxation* / ri: læk'seifn/ or / relək'seifn/.

Wells (2010c) further states that the same principles apply to the prefixes *de*and *pre*-:

- 1. Examples: deconstruct / di:kən'strAkt/, predetermine / pri:di't3:min/.
- 2. Examples: decide /di'said/ or /də'said/, prepare /pri'peə/ or /prə'peə/.
- 3. Examples: deodorant /di'əudərənt /, preoccupy /pri'pkjupaı/.
- 4. Examples: deference /'defrons/, preference /'prefrons/.
- 5. Examples: dereliction / derəˈlɪkʃn /, preparation / prepəˈreɪʃn/.
- 6. Examples: *premature* /'premətʃə/ or /'pri:mətʃə/ or / premə'tʃɔ:/

Out of the six points, only two are relevant to an investigation of HappY Tensing (because they deal with unstressed syllables, as opposed to stressed syllables): points 2 and 3. They tell one that HappY Tensing applies to those cases of the prefixes *de-*, *pre-* and *re-* that are vague in meaning and unstressed. When a consonant follows, one can also pronounce these prefixes with schwa; when a vowel follows, it is not possible.

There is one more thing that warrants attention: the inflectional suffixes *-es* and *-ed*. It has been pointed out that when there is a word ending in /i/, the same vowel can be employed when one adds the inflectional suffix *-es* or *-ed* to the word. Take, for example, the words *study* /'stAdi/, *studies* /'stAdiz/, and *studied* /'stAdid/. It all seems quite straightforward, but the reality is slightly more complicated. Wells (2010b) is of the opinion that some people may have a three-way vowel contrast between such words as *studied*, *studded*, and *juddered*, or *taxis*, *taxes*, and *taxers*, which is why he allows for such a possibility in his transcriptions. The words *studied* and *taxis* can be pronounced with KIT, FLEECE, or any intermediate vowel quality: /'stAdid/ and /'tæksiz/. *Studded* and *taxes* can have KIT or schwa, but not FLEECE: /'stAdid/ or /'stAdad/; /'tæksiz/ or /'tæksaz/. *Juddered* and *taxers* can only have schwa: /'dʒAdad/ and /'tæksaz/. In some speakers, however, the contrast between *studded* and *juddered* may be neutralized, with both being pronounced with schwa. Also, some speakers do not distinguish between *studied* and *studded*, pronouncing both with KIT.

2.4.2. KIT-Schwa Shift

KIT-schwa shift is another important process that involves a change in vowel quality in weak syllables. Cruttenden (2001, 107–108) argues that the change is not uniformly applied across all possible contexts. He claims that there are cases where both the vowels are used, as well as cases where one or the other is more common. Tables 12, 13, and 14 illustrate the complex situation. Bear in mind that only the predominant version is included in Tables 12 and 14. In Table 13, both are included because they are thought to be more or less on the same footing.

Orthography	EXAMPLES	TRANSCRIPTION
ity	qual ity	/'kwɒləti/
	abil ity	/əˈbɪləti/
itive	pos itive	/'pɒzətɪv/
	fug itive	/ˈfjuːdʒətɪv/
ily	happ ily	/ˈhæpəli/
	verily	/'verəli/
ate	chocolate	/ˈtʃɒklət/
	climate	/'klaɪmət/
ible	possible	/ˈpɒsəbl/
	vis ible	/ˈvɪzəbl/
em	syst em	/ˈsɪstəm/
	it em	/'aɪtəm/

 Table 12. Cases where schwa is predominant.

Table 13. Cases where both are used without much of a difference.

Orthography	EXAMPLES	TRANSCRIPTION
less	use less	/ˈjuːsləs/ /ˈjuːslɪs/
	aim less	/'eɪmləs/ /'eɪmlɪs/
ness	good ness	/'gʊdnəs/ /'gʊdnɪs/
	rude ness	/ˈruːdnəs/ /ˈruːdnɪs/
ace	pal ace	/'pæləs/ /'pælɪs/
	furn ace	/'f3:nəs/ /'f3:nɪs/

Orthography	Examples	TRANSCRIPTION
age	man age	/ˈmænɪdʒ/
	dam age	/ˈdænɪdʒ/
et	pocket	/ˈpɒkɪt/
	thick et	/ˈθɪkɪt/
be	begin	/bɪˈɡɪn/
	between	/bɪˈtwiːn/
se	select	/sɪˈlekt/
	secede	/sɪˈsiːd/
de	de ny	/dɪˈnaɪ/
	define	/dɪˈfaɪn/

Table 14. Cases where KIT is predominant.

As can be seen, not all problematic areas are covered. For example, consider the *-es* and *-ed* suffixes. They are not to be found in any of the previous three tables, but they are, in fact, very interesting as far as their variability is concerned. They seem to be perfectly suitable for a shift from KIT to schwa, but, as Fabricius (2002, 212) claims, "there is some doubt as to whether the *-es* and *-ed* suffixes do in fact participate in this change." Ladefoged (2006, 95) takes a similar position: "Most British and some American English speakers have a vowel more like [1] in suffixes such as *-ed*, *-(e)s* at the ends of words with alveolar consonants such as *hunted*, *houses* ['hʌntɪd, 'haozɪz]." Fabricius (2002, 233) talks about "a long-lasting process of change that has to some extent stalled or at least become sluggish as far as *-ed* and *-es* suffixes are concerned." There is "a clear preference for kit-like vowels" in the *-ed* and *-es* suffixes (Fabricius 2002, 222–223). These particular cases seem to be exceptions to the general trend of moving from KIT to schwa in weak syllables. One should also bear in mind that it is possible to use the happY vowel in certain contexts. More about this can be found in 2.4.1.

So far, cases have been considered where there is no opposition between KIT and schwa. Take, for instance, the word *palace*. It can be pronounced with either KIT
or schwa without any difference in meaning: /'pælıs/ and /'pæləs/ are transcriptions of one and the same word. However, that is not always the case. Consider the following pairs: *offices* and *officers*, *chatted* and *chattered*. Cruttenden (2001, 108) argues that when an opposition exist, "it might be expected that there would be some pressure to retain the / μ /–/ə/ distinction." Indeed, the pairs in question are often distinguished by the vowel in the suffix. Thus, *offices* is pronounced as /'pfisiz/ and *officers* as /'pfisəz/. Similarly, *chatted* is pronounced as /'ffætid/ and *chattered* as /'ffætəd/. However, oppositions of this sort may become completely neutralized over time. Cruttenden (2001, 108) claims that this has happened with pairs such as *effect/affect* and *except/accept*. Given the general trend, it may only be a matter of time before all such oppositions are lost completely.

3. PRACTICAL PART

3.1. Pronunciation Dictionaries

The fact that schwa is nowadays used much more widely in RP than it used to be in Daniel Jones's day can be illustrated by data from pronunciation dictionaries. An authoritative account of the current pronunciation preferences can be gained from J. C. Wells's Longman Pronunciation Dictionary, 3rd edition (2008). For comparison's sake, data is provided from a dictionary representing the state of affairs before the KIT-schwa shift began to make significant inroads into the way RP speakers spoke. The book in question—An English Pronouncing Dictionary, 7th edition (1945)—is a work of the most prominent British phonetician of the first half of the 20th century, Daniel Jones. He is often taken to have been an authority on phonetics at that time, but one should bear in mind that his options were, to a great extent, limited by the circumstances of that day. He was limited, first and foremost, by the non-availability of today's scientific apparatus. He relied heavily on his subjective impressions of what he heard. That is one of the reasons why the observations that can be found in any of his pronunciation dictionaries should not be conceived of as hard-and-fast facts, or dogmas. While Jones claims in his English Pronouncing Dictionary that "[t]he book is a record of facts, not of theories or personal preferences" (1945, ix), he seems to contradict himself a little when he goes on to say that the pronunciation represented in the dictionary is one that he believes to be most usually heard in everyday speech in RP (1945, ix). However, even in this day and age, subjective impressions play an important role in pronunciation dictionaries because they help to make the process of compiling such a dictionary feasible. This point notwithstanding, pronunciation dictionaries represent a good enough point of departure for the purposes of the following comparison.

The very complexity of the situation is presented in Tables 15 and 16, which contain examples of words and their various possible pronunciations in Jones's day and today. The basic difference between the two eras lies in the fact that there is no happY vowel to be found in EPD. It has been mentioned that the symbol for this vowel was introduced much later. Therefore, it is quite understandable that it is not present in this dictionary. By contrast, LPD makes use of this symbol very often. It is applied fairly systematically, but there are some exceptions that go against the established system. For more information, see section 2.4.1.

WORDS	EPD (1945)	LPD (2008)
happy	/ˈhæpɪ/	/ˈhæp i /
studied	/ˈstʌdɪd/	/ˈstʌd i d/
studies	/ˈstʌdız/	/ˈstʌd i z/
polytechnic	/ ppliˈteknɪk/	/ˌpɒliˈteknɪk/ /ˌpɒləˈteknɪk/
between	/bɪˈtwiːn/ /bəˈtwiːn/	/b i ˈtwiːn/ /bəˈtwiːn/
deplore	/dɪˈplɔː/	/diˈplɔː/ /dəˈplɔː/
effect	/ıˈfekt/	/əˈfekt/ /iˈfekt/
predict	/prɪˈdɪkt/ /prəˈdɪkt/	/pr i ˈdɪkt/ /prəˈdɪkt/
recover	/rɪˈkʌvə/ /rəˈkʌvə/	/r i 'kʌvə/ /rə'kʌvə/

 Table 15. Happy Tensing: comparison.

WORDS	EPD (1945)	LPD (2008)
direct	/dɪˈrekt/ /dəˈrekt/	/dɪˈrekt/ /dəˈrekt/
employ	/ımˈpləɪ/	/ımˈpləɪ/ /əmˈpləɪ/
enforce	/ınˈfɔːs/	/ɪnˈfɔːs/ /ənˈfɔːs/
select	/sɪˈlekt/ /səˈlekt/	/səˈlekt/ /sɪˈlekt/
foreign	/ˈfɒrɪn/	/' forən/ /' forın/
premises	/'premisiz/	/ˈpremɪsɪz/ /ˈpremɪsəz/
edited	/'edıtıd/	/'edıtıd/ /'edıtəd/
moderate	/'mɒdərɪt/	/'mɒdərət/ /'mɒdərɪt/
moderateness	/ˈmɒdərɪtnɪs/	/'mɒdərətnəs/ /'mɒdərətnıs/
careless	/ˈkeəlɪs/	/ˈkeələs/ /ˈkeəlɪs/
possible	/ˈpɒsəbl/ /ˈpɒsɪbl/	/ˈpɒsəbl/ /ˈpɒsɪbl/
ability	/əˈbɪlɪtɪ/	/əˈbɪləti/ /əˈbɪlɪti/

Table 16. KIT-schwa shift: comparison.

happily	/ˈhæpɪlɪ/	/ˈhæpɪli/ /ˈhæpəli/
positive	/'pɒzətɪv/ /'pɒzɪtɪv/	/'pɒzətɪv/ /'pɒzɪtɪv/
target	/'ta:git/	/'ta:gɪt/
system	/ˈsɪstɪm/ /ˈsɪstəm/	/ˈsɪstəm/ /ˈsɪstɪm/

The sample of words from Table 15 goes to show that the traditional KIT vowel has become tenser in certain positions somewhere between 1945 and 2008. The sample of words from Table 16 suggests that there has been a shift from KIT to schwa in the last sixty or so years. However, that should not be taken to mean that KIT has disappeared from the relevant words and been fully replaced by schwa—the shift is far from finished at this point in time. Rather, it is better to think of this shift as an ongoing, gradual change that leaves both options available for now, but alters the percentages of people that use one or the other in any given situation. Today both vowels can be used in RP in almost all the cases considered (*target* seems to be an exception), but more than five decades ago, the situation was not so straightforward, with only KIT as a possibility in words such as *deplore* or *effect*. Other words, such as *possible* and *predict*, were pronounced both ways even in Jones's time. The fact is that schwa has been gaining in popularity ever since the middle of the 20th century, and there are no signs yet that would indicate that this process of change will be ending any time soon. Thus, it is quite possible that RP might go the American way in the future, with the result that schwa will be the predominant (or only) option in the cases considered.

3.2. Suggestions for Further Research

The theoretical part has dealt with many problems related to reduced vowels. Although a great deal of information has been collected and many insights gained, there are still a few questions that the author believes warrant further investigation. Those questions pertain to the crucial part of the preceding text: to weak vowel changes.

The author suggests splitting the research into two independent parts. In the first one, the task would be to explore the *-es* and *-ed* suffixes more fully by way of acoustic analysis. The reason for this is quite obvious: doubts have been raised as to whether the suffixes do, in fact, participate in the KIT-schwa shift. LPD lists schwa alternatives in relevant examples, so it seems that they do, but some theoretical accounts take the opposite view.

The second part would focus on the other weak vowel change: HappY Tensing. It would have as its aim to look into the vowels used in the prefixes *be-*, *de-*, *e-*, *pre-*, *re-*, and *se-*. In RP, these have been traditionally transcribed with the KIT or schwa vowel. Before the arrival of the 3rd edition of LPD in 2008, the FLEECE vowel was thought of as non-RP in such contexts. However, it is no longer so. The question is whether the KIT vowel is still the predominant variant or not. Another question that needs to be answered is what is the current status of such prefixes as *se-* and *e-*. Wells himself is not sure whether his transcriptions of these prefixes are fully in accord with reality. Again acoustic analysis would be used here.

4. CONCLUSION

The thesis has explored in detail a very dynamic area of research: reduced vowels in RP. It has focused almost exclusively on two such vowels: schwa and KIT. Later on, though, yet other possibilities have been mentioned.

Schwa and KIT have been defined in several ways. From the articulatory viewpoint, schwa has been defined as a lax mid-central unrounded vowel, and KIT as a lax mid-high front unrounded vowel. From the auditory standpoint, KIT has been said to sound higher and more fronted relative to schwa. Finally, from the acoustic viewpoint, examples of formant frequencies of the vowels have been shown.

As far as the distribution of schwa and KIT in stressed and unstressed syllables is concerned, schwa is limited only to unstressed syllables, while KIT can occur in both stressed and unstressed ones. That stems from the fact that schwa is only ever a reduced vowel, whereas KIT can be both full and reduced.

Both KIT and schwa can appear in all basic positions in a word: word-initial, word-internal, and word-final. However, KIT in word-final position is confined only to Traditional RP. Modern RP users employ the happY (or FLEECE) vowel in such contexts. When word-initial or word-internal, they are often interchangeable—that is, they are in free variation. When word-final, they are not.

Schwa and KIT are idealizations. In reality, they stand not for one single vowel, bur for a range of similar vowels. Schwa is said to have a different quality when it occurs in final as opposed to non-final position, and yet another quality when it is adjacent to velar consonants. KIT as a full vowel is different from KIT as a reduced vowel.

Reduction can be defined in several ways. Basically, one can think of it as a process whereby a full vowel becomes a reduced vowel in an unstressed syllable. It has traditionally been considered a process of centralization because the final result of reduction is usually schwa, which is a mid-central vowel, but this line of thinking is now often seen as fallacious. A factor that is said to play a key role is coarticulation. Schwa can assume slightly different qualities based on the surrounding sounds.

Schwa is the most frequently occurring vowel and most important reduced vowel. It is relatively short. In fast speech, it may be deleted altogether. It often appears in weak forms of some frequently used words (grammatical words), but it may also appear in unstressed syllables of lexical words. Its rate of occurrence may also have something to do with speech tempo and style. Schwa in word-final position is stable, while schwa in non-final position is very variable.

Reduced vowels in RP have been undergoing gradual changes since approximately the half of the 20th century. In particular, two shifts have been identified that have had a major impact on the vowels in question: KIT-schwa shift and HappY Tensing.

It has been noted that the changes are not yet complete and are not universally applied by all speakers in all relevant contexts. In other words, there is a great deal of variability both between speakers and between contexts. When there is free variation between KIT and schwa, users of Traditional RP (a conservative, slightly old-fashioned variety of RP) tend to prefer the KIT vowel over schwa, while users of Modern RP are inclined to opt for schwa. It has thus been concluded that there is some correlation between vowel choice and age, with older speakers more likely to use KIT rather than schwa. When there is an opposition between KIT and schwa, the distinction is more likely to be retained, but it is far from any hard and fast rule. As far as various environments (or contexts) are concerned, some seem to be more prone to change than others. The oft-quoted examples of environments that go against the general trend toward schwa are the suffixes *-es* and *-ed*.

The process of HappY Tensing is thought to have started a little later than the KIT-schwa shift. Still, it has progressed very far, affecting not only the word-final KIT vowels, but also the KIT vowels in prevocalic positions, as well as the ones at the end of stems and prefixes. However, not all these changes are considered uncontroversial. The use of the so-called happY vowel in certain prefixes (*be-*, *de-*, *e-*, *pre- re-*)—an innovation in the 3rd edition of LPD—is particularly troublesome, not least because in the first two editions of the same dictionary such a thing was viewed as non-RP. The originator of this innovation is the British phonetician J. C. Wells, the author of LPD. It has been mentioned in passing that he himself is not completely convinced that the step he has taken has always been for the better. Far from questioning the wisdom of such a decision, the thesis aims to offer a balanced view of the complex situation, which involves pointing out possible issues. Not only is there uncertainty as to whether the aforementioned prefixes do, in fact, participate

in the HappY Tensing process in RP, but there is also uncertainty about whether the exclusion of the prefix *se*- has indeed been a good decision.

Examples from two dictionaries have been used to prove that weak vowel changes have really been happening. Apart from that, it has been established that it is not tenable to talk about reduced vowels as only two vowels (KIT and schwa), because the situation is much more complicated than that. The happY vowel is a case in point.

Since some of the questions raised throughout the theoretical part deserve more attention, a few suggestions for future research have been included to make anyone interested in this topic aware of some of the outstanding issues that this field of research has to offer.

5. SHRNUTÍ

Tato bakalářská práce si dala za úkol detailně prozkoumat redukované samohlásky v britské angličtině, resp. v jejím standardním akcentu zvaném Received Pronunciation (RP), přičemž se zaměřila především na dva základní redukované vokály, jež jsou známy jako šva /ə/ a KIT /I/.

V prvé řadě bylo nutné definovat bazální rysy těchto samohlásek. Šva tvoří pomyslný střed vokalického čtyřúhelníku a je charakterizována jako středová samohláska co se týče vertikální dimenze a střední co se týče horizontální. Dále pak je z hlediska zaokrouhlenosti považována za nezaokrouhlenou a z hlediska napjatosti za nenapjatou. Samohláska KIT je charakterizována jako polozavřená, přední, nezaokrouhlená a nenapjatá. Tyto vokály se tak liší ve dvou z uvedených rysů.

Kromě rozdílů v artikulaci se dané vokály liší i v jiných rovinách, a to sice v rovině akustické a auditivní. V první jmenované lze diference vysledovat v rezonančních frekvencích F1, F2 a F3, které se dají odečíst ze spektrogramu. Idealizovaná forma samohlásky šva má následující hodnoty: F1 = 500Hz, F2 = 1500Hz a F3 = 2500Hz . Tyto hodnoty je však nutno brát s rezervou, jelikož je tento vokál velice variabilní, protože na něj působí různé koartikulační vlivy, jejichž původci jsou okolní vokály a konsonanty. Značnou variabilitu lze ale vysledovat i u samohlásky KIT, přičemž platí, že F1 je obecně nižší a F2 vyšší než u švy. Konkrétní průměrné hodnoty pro KIT, jež byly výsledkem několika studií týkajících se monoftongů v britské angličtině, byly uvedeny v příslušné tabulce. V případě švy však bylo konstatováno, že studie, jež by měřily formanty této samohlásky v britské angličtině, v podstatě chybějí, a proto zde nejsou přímo uvedeny. Je zde však uveden odkaz na americkou studii zabývající se mimo jiné touto problematikou.

V auditivní rovině se dané samohlásky liší tím, jak jsou vnímány sluchem. Člověk tak vnímá, jak mu daná samohláska připadá v relaci na skupinu referenčních vokálů (tzv. cardinal vowels). KIT je z tohoto hlediska považována za zvýšenou a centralizovanou podobu CV2. Šva je chápána jako neutrální samohláska, kterou není možné jasně definovat za pomocí těchto referenčních vokálů, jelikož se nevyskytuje při periferii vokalického čtyřúhelníku, nýbrž v jeho středu. Ačkoliv se daný čtyřúhelník, jenž vymezuje prostor, v němž se nachází celý samohláskový inventář angličtiny, často považuje za model zachycující artikulaci samohlásek, ve skutečnosti spíše reflektuje auditivní stránku věci.

Šva je klasifikována pouze jako redukovaná samohláska, kdežto KIT může být jak samohláskou redukovanou, tak neredukovanou. S tím souvisí i distribuce těchto vokálů v přízvučných a nepřízvučných slabikách. Redukované vokály se mohou objevit pouze v nepřízvučných slabikách, kdežto neredukované vokály se mohou objevit jak v přízvučných, tak nepřízvučných. Z toho tedy plane, že šva je omezena pouze na nepřízvučné slabiky, kdežto KIT není.

Jak šva, tak KIT se mohou objevit v různých pozicích, ať už na začátku slova, uvnitř, či na konci. Avšak tento výrok je nutno určitým způsobem modifikovat, aby opravdu odpovídal realitě. Problém zde spočívá v pozici na konci slova. Zde je totiž nutné rozlišovat mezi tzv. Traditional RP (starší, konzervativní formou tohoto akcentu) a Modern RP (modernější formou), a to z toho důvodu, že tyto variety používají odlišnou samohlásku na konci slova ve slovech typu *happy*. Traditional RP využívá již známou samohlásku KIT, kdežto Modern RP využívá vokál zvaný happY. Ten je specifický v tom, že jeho realizace je velice variabilní a zahrnuje rozsah od samohlásky KIT přes různé přechodné vokály až po samohlásku FLEECE. Tento proces, při kterém dochází k přechodu od nenapjaté samohlásky KIT k napjaté samohlásce FLEECE se odborně nazývá HappY Tensing. Taktéž je nutno upozornit na fakt, že šva a KIT jsou často naprosto zaměnitelné, tedy nacházejí se v tzv. volné variaci. To ovšem platí jen pro dvě ze zmiňovaných tří základních pozic: na začátku a uvnitř slova. Na konci tyto vokály spolu kontrastují.

Jak již bylo naznačeno, redukované samohlásky jsou velice proměnlivé, co se jejich kvality týče, a proto je vhodné o nich uvažovat spíše jako o množině kvalitativně velmi podobných vokálů. Realizace dané samohlásky v praxi je totiž do značné míry ovlivněna koartikulačními efekty. Na její výslednou podobu může mít vliv taktéž její pozice v rámci konkrétního slova. Šva je považována za vůbec nejvariabilnější samohlásku v angličtině. Co se jejích variant týče, dá se říci, že jich má celou řadu. Někteří vědci se přou o to, kolik přesně jich opravdu je. V této otázce nebylo dosud dosaženo jasného konsenzu. V přehledu, jenž byl součástí teoretické části práce, byly uvedeny tři základní varianty. Jedna z nich je šva na konci slov, která se liší od její idealizované podoby v tom, že je ve vokalickém čtyřúhelníku nikoli ve středu, nýbrž pod ním. Druhá z nich je šva v ostatních pozicích, která víceméně odpovídá idealizované podobě, tedy je ve středu. Třetí z nich je šva, v jejímž okolí se vyskytují velární konsonanty. Zde dochází k tomu, že výsledná samohláska je v rámci vokalického čtyřúhelníku nad středem a ještě k tomu posunutá lehce dozadu. U samohlásky KIT jsou za základní varianty považovány KIT jako neredukovaná samohláska a KIT jako redukovaná samohláska. Druhá ze jmenovaných se liší od té první tím, že tenduje ke středu vokalického čtyřúhelníku.

Redukce může být chápána různými způsoby, z nichž asi ten nejvýstižnější mluví o redukci jako o procesu, při kterém dochází k přeměně neredukované samohlásky v redukovanou, a to v nepřízvučné slabice. Existují tu různé názory na podstatu vokální redukce. Jedna z nich říká, že tento proces je de facto totožný s procesem centralizace. Druhá říká, že tento proces je především procesem koartikulace. Třetí kombinuje obě předešlé.

Šva je nejčastěji se vyskytující samohláskou, a proto si zaslouží zvláštní pozornost. Kromě již dříve zmíněných údajů, je vhodné doplnit několik podstatných informací. Šva je většinou poměrně krátká a někdy dochází k tomu, že je úplně vypuštěna. Zatímco šva na konci slov je poměrně stabilní, opak je pravdou u švy v ostatních pozicích. Tato samohláska se objevuje u často používaných slov, jako jsou předložky, spojky, pomocná slovesa apod. Kromě toho se objevuje i v lexikálních slovech v nepřízvučné samohlásce. Míra jejího výskytu se mimo jiné váže na rychlost a styl projevu.

Od poloviny 20. století dochází v rámci redukovaných samohlásek k podstatným změnám. Tato práce zkoumala dvě takové změny: tzv. KIT-schwa shift a HappY Tensing. KIT-schwa shift probíhá déle než HappY Tensing, nicméně ani jedna z nich není zcela dokončená.

První z výše zmíněných změn se týká postupného přechodu od samohlásky KIT k samohlásce šva. Tato změna je sice velice rozšířená, ale není aplikována univerzálně. Existují tu tedy rozdíly mezi jednotlivými mluvčími, jakož i rozdíly mezi jednotlivými případy. Co se týče mluvčích, je zde patrná tendence těch, co mají Traditional RP akcent, používat KIT, nikoli švu. U těch, jež mají Modern RP akcent, je naopak tendence používat právě samohlásku šva. Co se týče jednotlivých případů, u některých z nich je změna tak pomalá, že se pochybuje o tom, zdali vůbec probíhá. To je především případ dvou sufixů: *-ed* a *-es*.

Druhý proces, jenž se týká redukovaných samohlásek, je HappY Tensing. Tento proces spočívá v postupné změně tradiční samohlásky KIT v samohlásku HappY. Tomu se děje nejen na konci slov (např. *happy*), ale také na konci některých prefixů (*be-*, *de-*, *e-*, *pre- re-*), složených slov (např. *multilateral*) a před samohláskami (např. *curious*). Zde je nutno uvést, že použití samohlásky happY v prefixech, novinka uvedená ve 3. vydání LPD, není zcela bez problémů. Ty pramení z faktu, že v předcházejících vydáních tyto výslovnosti nebyly považovány za standardní. V některých případech si dokonce sám autor není jist, zdali udělal dobře či nikoliv. Zvláštním případem se zdá být prefix *se-*, u kterého nedošlo ke změně.

Teoretická část je doplněná částí praktickou, jejíž základ tvoří srovnání výslovností některých relevantních slov u dvou specializovaných slovníků, z nichž jeden je slovník z roku 1945 a druhý z roku 2008. Toto srovnání vede k závěru, že v RP opravdu docházelo a dochází ke KIT-schwa shiftu a HappY Tensingu. To, že se zde do hry dostává i další samohláska (happY), je důkazem toho, že redukované samohlásky nejsou jen KIT a šva, nýbrž jsou tu ještě i jiné možnosti.

V rámci praktické části byly taktéž formulovány některé návrhy pro potenciální budoucí výzkum. Jako velice zajímavé oblasti pro výzkum se jeví problematika sufixů *-es* a *-ed*, u kterých se stále neví, zdali se účastní KIT-schwa shiftu, a dále pak problematika prefixů *be-*, *de-*, *e-*, *pre-*, *re-* a *se-*, u kterých se vede debata o tom, zdali podléhají HappY Tensingu, a pokud ano, do jaké míry. Otázkou pak také je, která samohláska je častější v těchto konkrétních případech (KIT, FLEECE či jiná varianta).

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Abstrakt:

Tato práce si dává za úkol detailně prozkoumat redukované samohlásky v britské angličtině (ve standardním RP akcentu), přičemž se hlavně soustředí na změny a variabilitu v této oblasti. Je rozdělena na teoretickou a praktickou část. V teoretické části se postupně zabývá základními rysy dvou stěžejních redukovaných samohlásek (KIT a šva), jejich distribucí a variantami. Dále pak definuje, co to vůbec redukce u samohlásek je, a zaměřuje se blíže na švu, jelikož je nejpoužívanější redukovaným vokálem. V poslední oddílu teoretické části se pojednává o dvou zásadních změnách u redukovaných samohlásek: o tzv. KIT-schwa shiftu a HappY Tensingu. Tyto změny vnáší do celé této oblasti značnou míru variability. Praktická část se skládá ze dvou oddílů. První z nich se zaměřuje na srovnání vzorků dat ze dvou výslovnostních

slovníků, z nichž jeden je z roku 1945 a druhý z roku 2008. Toto srovnání ilustruje vývoj ve výslovnosti daných slov během posledních zhruba 60 let. Jeho úkolem je pomoci určit, zdali dochází v RP ke dvou výše zmíněným změnám. Druhý oddíl obsahuje několik podnětů, které by mohly vést k dalšímu výzkumu.

Abstrakt v angličtině:

The present thesis aims to explore in detail reduced vowels in British English (more specifically, in RP), with a particular emphasis on change and variability. It is divided into the theoretical and practical part. The theoretical part deals, in turn, with the basic characteristics of the main reduced vowels (KIT and schwa), with their distribution, and with their variants. Next, the thesis defines what vowel reduction means and then focuses more on schwa, since it is the most frequently used reduced vowel. In the last section of the theoretical part, two major weak vowel changes are explored: KIT-schwa shift and HappY Tensing. These changes bring a great deal of variability into this area. The practical part is composed of two sections. The first one is devoted to a comparison of data samples from two pronunciation dictionaries. One of the dictionaries is from 1945, and the other is from 2008. The comparison thus illustrates the development of pronunciations of the given words during the last sixty years or so. Its purpose is to help determine whether the two aforementioned changes are indeed real. The second section offers a few suggestions for further research.

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