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Defining Britain's most appealing voice: An accent profile of Sir Sean Connery

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1. Introduction

1.1 Research Question

In January 2003, The Scotsman newspaper reported that Sean Connery had been voted as having the world's sexiest male voice (Stewart 2003). In November 2004, the BBC survey into people's opinions on accents and language found that British people thought Sean Connery had the most pleasant voice from a selection of celebrities. Furthermore, in 2006 his voice was judged by researchers for the charity Sports Relief to be most likely to inspire donations (BBC website 2006). Clearly, there is something unique in Connery's accent that has ensured this string of awards and generated such interest. The media does not however expand upon what is so special with Connery's accent other than labelling it as a 'distinctive Scottish brogue' or 'dulcet Edinburgh tones'. What is it that is so peculiar to Sean Connery's accent that sets his voice apart from others? Does he conform more to Scottish Standard English, Received Pronunciation or something else? Are there clues to be found as to his background in the way in which he talks?

1.1.1 Aim & Hypothesis

The aim of this essay is to explore the individual features and characteristics that combine to make up the distinctive accent of the actor Sir Sean Connery. These features will be examined and measured to find out to what degree they are representative of Scottish Standard English. Furthermore, this essay aims to identify within Connery's accent features that may reveal clues to his background growing up in the city of Edinburgh. It is hypothesized that the subject speaks a modified form of Scottish Standard English although retains the essential qualities typically associated with SSE such as rhoticity, the basic Scottish vowel system and adherence to the Scottish Vowel Length Rule (Aitken's Law).

1.1.2 Motivation

The motivation behind this study is the media's and indeed public's apparent fascination with Sean Connery's voice and yet the lack of any attempt to describe it further than with the use of unsatisfactorily vague terms such as 'Scottish brogue', 'dulcet tones' or 'Edinburgh burr'. The Scotsman newspaper reports that, "Throughout his lengthy acting career Connery has made his accent part of his trademark."(Jackson 2005). Indeed, Connery retains his accent in

almost every film role he has had, roles as diverse as Robin Hood (*Robin and Marian*), a Russian submariner (*The Hunt for Red October*) and King Richard I of England (*Robin Hood: Prince of Thieves*). While it should be noted that this study recognises Connery as a speaker of Standard English as opposed to a non-standard regional dialect, it is the nature of his **accent** that interests us.

Clearly he has strong opinions on his accent. When asked about the subject of accents Connery is quoted as saying, "to cultivate an English accent is already a step and a departure away from what you are…your own background and environment is with you for life. No question about that." (Fraser & de Liedekerke 2006). All of this serves to warrant further investigation into Connery's accent.

1.2 Subject Background

Sean Connery was born in 1930 in the Fountainbridge area of Edinburgh. His father's roots were Irish catholic while his mother was protestant. Fountainbridge was a working-class area of Edinburgh and Connery had a working-class upbringing in the city before working in a variety of manual labourer jobs. He turned to acting in the 1950's and after a series of successful movies, left Britain in 1975 and has lived abroad ever since. He currently lives in the Bahamas. (Source: *Wikipedia* online encyclopaedia).

Sean Connery is a high profile campaigner for the Scottish Nationalist Party and his strong feelings for his country of origin are further reflected in a tattoo he has had most of his adult life which states 'Scotland Forever'.

The issue of national pride may go some way to explaining why Connery has retained his distinctive accent throughout his career. The BBC Voices survey that found Connery to have the most pleasant voice from a selection of well-known figures from a variety of regions in the UK also found that Scots represented the region most proud of their accents. Jane Stuart-Smith, English lecturer at Glasgow University, explains why this might be; "When you consider Scotland's relationship with the United Kingdom, most Scots tend to be particularly proud of their Scottishness rather than their Britishness, and it follows they would be proud of the accent that reveals them as Scots" (Jackson 2005). Stuart-Smith however, questions the reasons behind the results of the BBC survey. "His accent is so popular because people

associate his voice with the stereotype of an attractive persona... When people voted for him, I wonder whether they were thinking about Sean Connery himself or James Bond, who is associated with a suave, elegant mysterious figure" (Jackson 2005).

Whatever the reasons for its appeal, Connery's voice continues to attract interest with the actor recently completing a voice-over role for an animated feature (*Sir Billi the Vet*).

1.3 Choice of data/material

Ideally for a study of this nature a passage of speech would be recorded under laboratory conditions and the language would be controlled to a certain extent to allow for easier analysis. However, such a procedure is not feasible in this case. Nevertheless there is a large selection of recorded material to choose from which can then be analysed. Although Connery retains his accent in many of the movies he has made, it was deemed more appropriate to study a passage of spontaneous speech as opposed to scripted speech. A speech made by Connery to a gathering of his peers has therefore been analysed for this project. The speech was made at an award ceremony (American Film Industry: June 2006) in his honour, and so much of the speech contains spontaneous as opposed to scripted language. Any scripted language will also, it is assumed, have been written by the subject himself. It is an emotional occasion for the subject and as such the speech given is for the most part, a genuine example of the subject's use of the language.

1.4 Method

The analysis of speech can often appear to be highly subjective. How one person interprets a sound may differ from how another person interprets the same sound. A variety of factors such as the listener's own background may serve to colour the results of a simple acoustic analysis of a subject's voice. For this reason I have decided to analyse the voice of Sean Connery from a more objective perspective, using instrumental analysis to aid my interpretation of the material. In this way my observational analysis is similar to that of J.D McClure in his study of formant frequencies within SSE (see McClure 1995). The speech was recorded in .wav format so that is could be easily utilized by the speech analysis software programs Wavesurfer (version 1.4.7.) and Praat (version 4.4.33.). These packages enable the user to conduct speech and sound analysis and are readily available as freeware on the internet.

Wavesurfer was primarily used for its editing functions and to record individual sound files for words and phonemes. Both programs are suitable for the extraction and generation of data applicable to this investigation, i.e. formant frequencies, vowel duration, etc. The guidelines set out in Engstrand's book *Fonetikens grunder* (2004) were followed for the data extraction process and the accompanying website's tutorials were completed before embarking on this task.[1] A variety of diagrams and charts have been produced throughout the research to simplify the analysis procedure.

This study begins with the analysis of Connery's vowel system. Formant values were compiled for the various vowel realisations in Connery's speech and mean values were then calculated. In order to gauge the formant values, Praat's formant plotting tool was used (see Appendix figure 1). Where there was any uncertainty regarding the values, these values were read manually from Wavesurfer's formant plot tracking tool (see Appendix figure 2). Uncertainty arose occasionally in the case of the lower back vowels as both the F1 and F2 values were very similar to one another. Formant values could however be extracted manually in these situations.

2. Vowel System

2.1 Motivation

Giegerich (1992:43) points out that the consonant system of English is relatively uniform and that it is therefore fair to say that accents differ in terms of their vowel systems. This too is indicated by Engstrand, "The quality and diphthongisation of vowels are among the phonetic properties which to a great extent give different dialects their distinctive character" (2004:116) my translation). It will therefore be the vowel system used by Sean Connery that we shall turn to in order to discover the nature of his accent.

The vowel systems attributed to SSE have been analysed by researchers previously (see McClure (1995), Stuart-Smith (1999), Chirrey (1999), Giegerich (1992)) and this allows us to compare the findings from this study with theirs.

[1] In addition, Professor Engstrand made himself available for any advice I needed concerning this process, for which I am grateful.

2.2 Analysis

A vowel trapezium is among the most common methods of representing the differences between vowels. A vowel can, in this way, be described in articulatory terms using such a schematic representation. The trapezium is used to represent the oral cavity and the position of the vowel within this trapezium represents the point of articulation in the oral cavity.

Using the trapezium in figure 3 (below) it is therefore possible to state that the phoneme /i/ as in <read> /rid/ is a high front vowel. Furthermore, it is possible to describe /i/ in terms of lip rounding. In this instance /i/ is unrounded.

The vowels marked on the trapezium in figure 3 are referred to as Cardinal Vowels (a system devised by Daniel Jones) and serve as extreme representations of the vowel. In real life vowels are not quite as extreme in the nature of their articulation (Giegerich 1992:15).

"…'real life' vowels such as those found in English do not display the dimensions of height, backness and rounding as purely as the cardinal vowels do. Their tongue position will never actually reach the extreme points of highness, lowness, backness and frontness. Moreover, they are not always of constant quality throughout their duration – in fact, they seldom are." (Giegerich 1992:17)

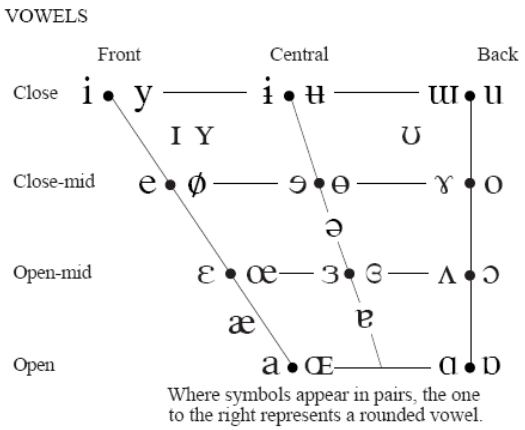

Figure 3

Vowel Trapezium (source IPA)

Quantitatively, vowels can be distinguished from one another through analysis of the frequency content of their sounds. The frequencies are divided into formant values, F1, F2,

F3, etc. Usually the values for F1 and F2 are enough to establish which vowel is being produced. These values are determined by the position of the tongue during articulation. A high F1 value indicates a low tongue position and a high F2 value indicates that the tongue is in a forward position. Therefore, as Engstrand notes, "…there is a certain relatively straightforward connection between the articulatory dimensions high-low and front-back and the resultant formant patterns." ((2004:97) my translation.).

For the purpose of my investigation into the nature of Connery's vowel system I shall calculate the formant values of the vowel sounds taken from a sample of his spontaneous speech and plot them on a formant chart. Their resultant position on the chart can then be interpreted as being representative of their position on a vowel trapezium. My findings will then be compared to previous research in this area concerning both SSE and RP English.

2.3 Comparison between SSE & RP – an overview

SSE recognises nine basic vowel phonemes (Giegerich 1992:46; McClure 1995:376) (see below).

Vowel Phonemes of SSE
/i/ /ɪ/ /e/ /ɛ/ /a/ /u/ /o/ /ʌ/ /ɔ/

This is four less than RP English which has thirteen (see below).

Vowel Phonemes of RP
/i/ /ɪ/ /e/ /ɛ/ /ɑ/ /a/ /u/ /ʊ/ /o/ /ʌ/ /ɔ/ /ɒ/ /ɜ/

In SSE the pair wise opposition does not exist between the vowel phonemes /ʊ/ and /u/, /ɒ/ and /ɔ/. This results in there being no phonemic difference between the word <pool> and <pull> or between <not> and <naught> in a SSE accent as there would be in an RP accent. These words are homophones in SSE. Giegerich accounts for this difference as follows:

"SSE lacks a pair wise opposition found in RP and has a single phoneme instead…the phoneme that SSE lacks is in each case the one with the more restricted distribution, namely the one that cannot occur in open syllables: in each of the depleted pairs,

the member that SSE retains is free to occur in open and closed syllables." (Giegerich 1992:54)

2.4 Results

The appendix contains the mean frequencies for the vowel phonemes (table 1) and the raw data (table 4).

2.4.1 Mean data and comparison with other SSE research (Stuart Smith (1999) and Fisk (2006))

Figures (4.1), (4.2) and (4.3) show the mean values for Connery's basic vowel system plotted alongside the values recorded by other researchers in this area (Stuart-Smith and Fisk). As there has been little research of this kind we will have to make do with formant values for speakers representing Glasgow accents. The analysis nevertheless concerns Scottish Standard English accents and so these data remain valid to this study. The observations of similar research into the Edinburgh accent will also be taken into account in the following analysis. The values recorded by Fisk (Figure 4.1) are values for his own voice. He describes his voice as 'posh Glasgow' and one which many English people find difficult to place as being Scottish. His own background would suggest he is representative of an upper-middle class section of society. The values recorded by Stuart-Smith represent those of old male speakers, the first (Figure 4.2) is a middle-class speaker, while the other (Figure 4.3) is a working-class speaker. [2]

[2] The formant values for diagrams 4.1, 4.2 and 4.3 have been provided with the kind permission of Jane Stuart-Smith and Donald Fisk.

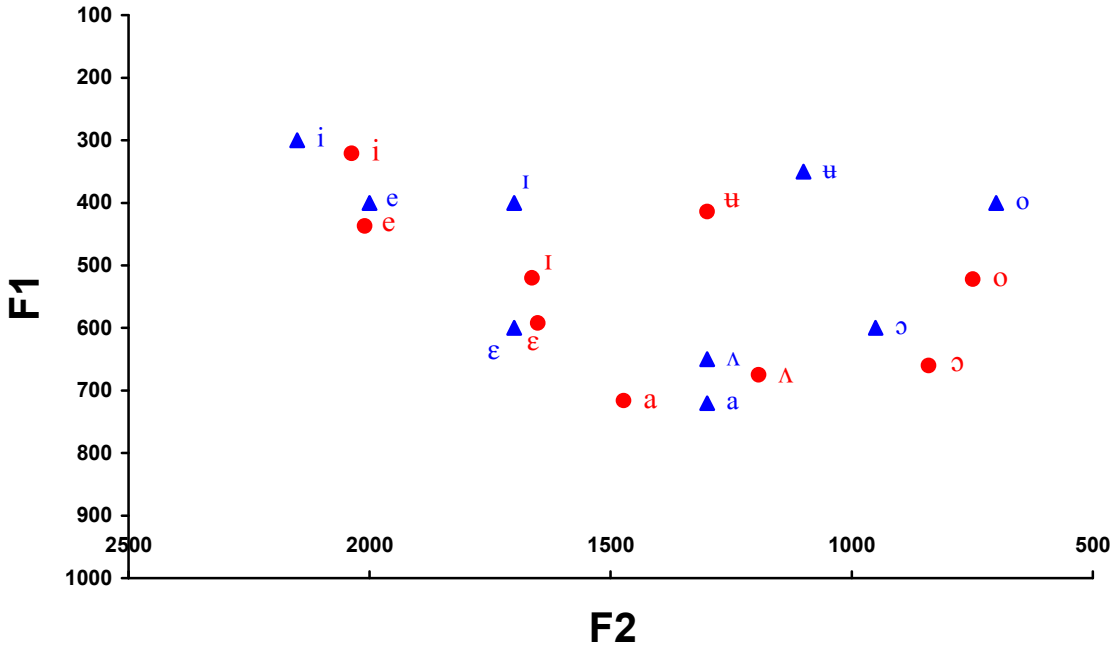

Figure 4.1

● Vowel formant plots of Sean Connery

▲ Vowel formant plots of Scottish Standard English (Fisk)

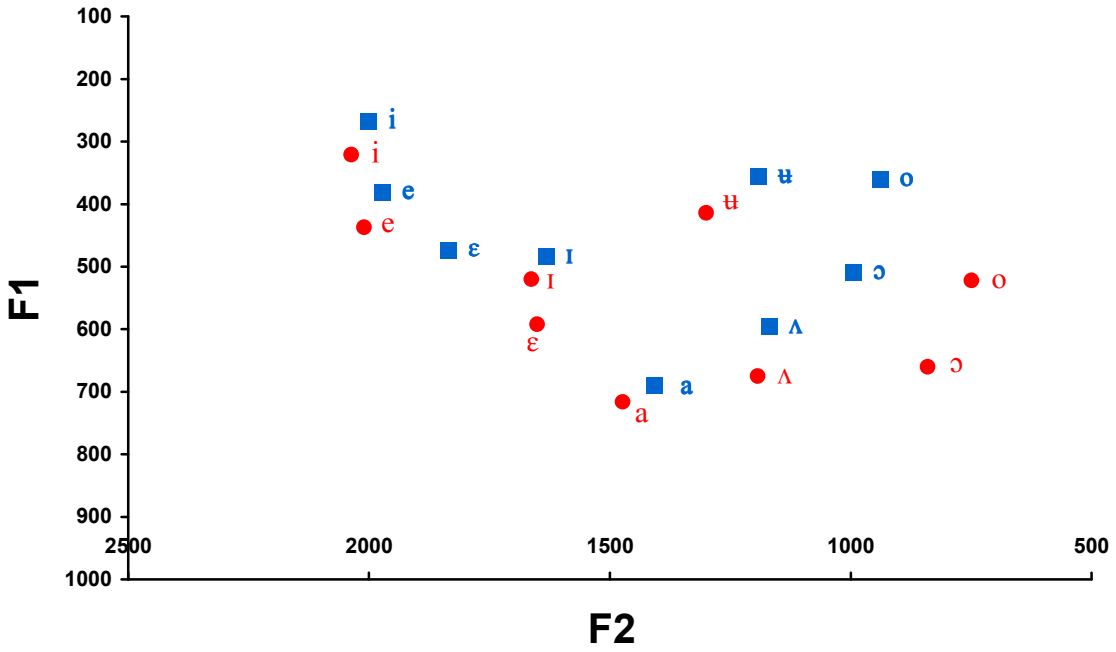

Figure 4.2

● Vowel formant plots of Sean Connery

■ Vowel formant plots of a typical middle-class man (Stuart-Smith)

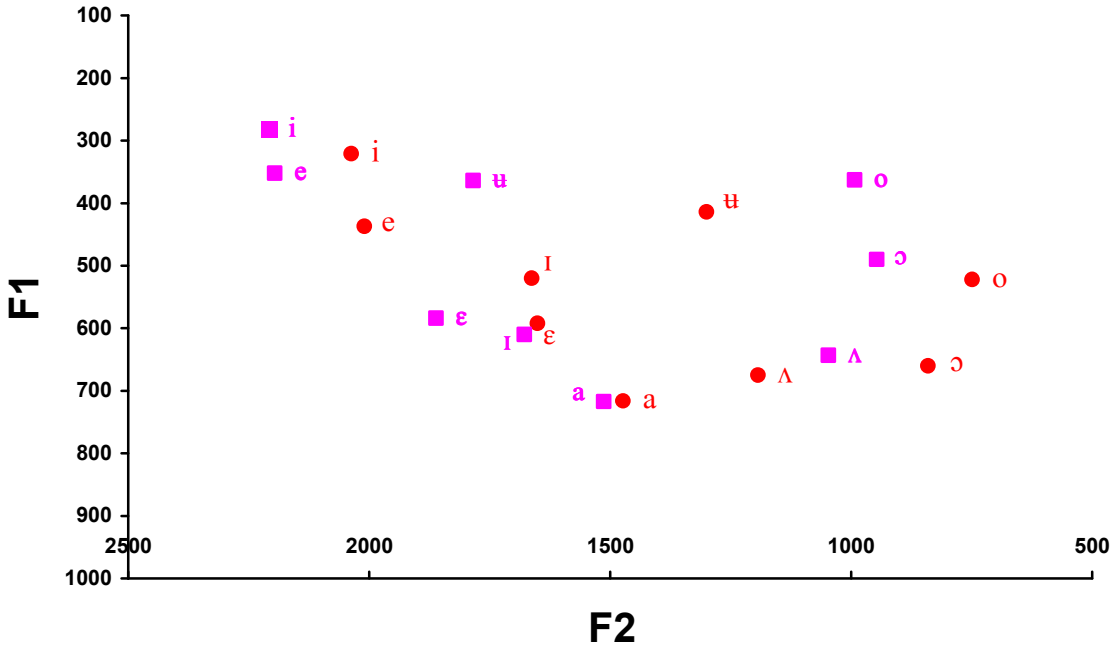

Figure 4.3

● Vowel formant plots of Sean Connery

■ Vowel formant plots of a typical working-class man (Stuart-Smith)

While Connery's vowel system adheres roughly to previously recorded data for SSE it is possible with the aid of these schematic representations to identify where Connery's accent differs from those of his countrymen.

The first pattern that emerges through analysis of these charts is that Connery's vowels seem to be slightly lower in general than those recorded by Fisk and Stuart-Smith. The most notable of these are the low back vowels /ʌ/ and /o/. Besides this lowering of the vowels, Connery's vowels also appear to be backer in quality when compared to many of the other recorded realisations. The significance of these and other differences will now be expanded on.

When looking at the mid vowel /ɪ/ in comparison to Fisk's and those of a middle-class male from Glasgow we note that it is lower in both instances. Interestingly, however Connery's /ɪ/ is higher than the /ɪ/ represented in Stuart-Smith's findings concerning a working-class male. Stuart-Smith suggests that a low /ɪ/ is indicative of a working-class accent (1999:208), and this is borne out by the particularly low /ɪ/ in Figure 4.3. This would suggest that while

Connery's /ɪ/ is not as working-class in nature as that in Figure 4.3 it is nevertheless not as middle-class in nature as the others represented here.

Another phoneme prone to movement within the accent is that of /ʉ/ (sometimes written as /u/ though this would indicate a backness quality). Stuart-Smith states that a backer quality in the /ʉ/ phoneme has been found to indicate higher class status. Again, this is apparent when one compares the middle-class man with the working-class man's realisations above. We can observe that while Connery's /ʉ/ is not as far forward in nature as that of the working-class man, it is however further forward than both the middle-class man and the /ʉ/ of Fisk. The social implications therefore would seem to support the observations made regarding /ɪ/ above.

This frontness quality is also seen in Connery's /a/ which, while of a similar height, is in this instance further forward than Fisk's and slightly lower and further forward than that of the typical middle-class man. Again, according to Stuart Smith this may have connotations to class, though conversely so to the /ʉ/ phoneme. An /a/ which is backer in quality is linked to a lower class pronunciation. While Stuart-Smith indicates that this proved to be the case in her study it is not indicated when we compare her two charts. Connery's /a/ appears further forward than both Fisk's and the middle-class speaker and is almost identical to the working-class realisation recorded on Stuart-Smith's chart. This certainly appears to follow the pattern of the observations above and may suggest that a front quality in the /a/ is in fact a sign of lower class rather than a back quality.

McClure (1995:376) observed that in SSE accents several vowels tend to group together on the horizontal axis (i.e., share similar F1 values). These vowels are [e] and [ɪ], [ɔ] and [ʌ], and [o] and [ʉ]. This certainly is evident in the recorded values for Fisk. Although similar, this is not so apparent when studying Connery's values. [ɔ] and [ʌ] certainly reflect McClure's observations however [ɪ] is much lower than [e] and [o] much lower than [ʉ]. This is seen also in the values for the middle-class speaker and to a degree in the working-class speaker's values too. This may indicate that McClure's observations concern those of upper-middle class to upper-class speakers, a category that would appear to apply to Fisk.

Overall, Connery's values seem to be most similar to the values recorded for a middle-class speaker though they are in general lower and in several instances indicate a quality associated more with a working-class speaker. Chirrey makes an important observation in respect to class in her study of the Edinburgh accent:

> "…Edinburgh can be described in general as more middle-class than Glasgow, and thus Edinburgh speakers are on the whole more oriented towards standard varieties than their Glasgow counterparts." (Chirrey 1999:224)

If this is the case, then one might expect a middle-class accent in Edinburgh to be of a similar nature to a higher-class speaker from Glasgow (for example, Fisk). This assumption would therefore imply that Connery's accent, which is almost as middle-class in nature as that shown in figure 4.2, would be regarded as even more working-class in nature in Edinburgh.
Given Connery's Edinburgh background it is perhaps not surprising that his accent in many ways represents middle-class traits. What is interesting however is that there are a number of working-class indicators in his accent which can perhaps be traced back to his own working-class roots.

2.4.2 Mean data and comparison with RP values (Hawkins & Midgely (2005))

Figure 4.4 (below) displays the mean values of Connery's vowel system alongside the mean values of a male RP speaker. Both speakers are approximately the same age which allows us to conduct an accurate comparison of their vowel realisations. The RP values are taken from a study by Hawkins and Midgely (2005). Although the evidence above would certainly identify Connery as a speaker with an SSE accent it is interesting to compare his vowel system with that of an RP speaker and discover to what degree it exemplifies the differences between an SSE accent and an RP accent.

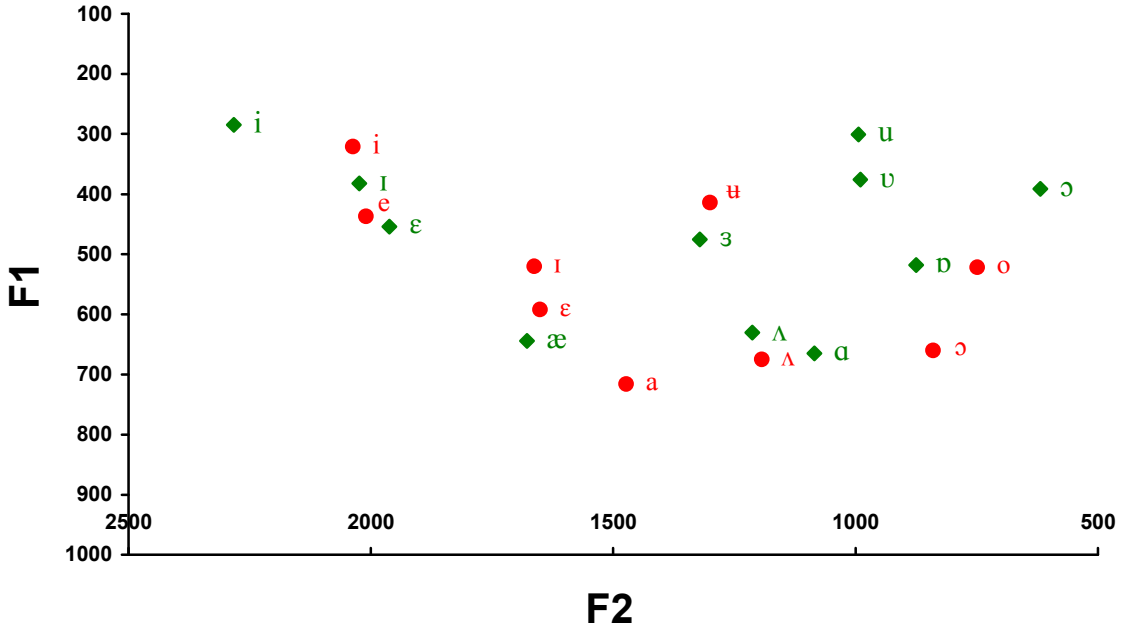

Figure 4.4

● Connery's Vowel Phoneme Formant Values

◆ Male, 65+, RP Vowel Phoneme Formant Values

(*Note that Hawkins and Midgely use the phonetic symbol /æ/ where Giegerich uses /a/)*

When we compare Connery's realisation of the vowels to an RP speaker's we see a number of interesting differences.

Firstly, due to the aforementioned maintenance of pair distinctions in RP we see two new phonemes plotted on the chart. In RP there are therefore 11 monophthongal vowels. (Note that /e/ and /o/ are realised as diphthongs in RP /eɪ/ and /oʊ/ whereas they are monophthongs in SSE.)

We notice that the RP /i/ is much further forward and indeed even higher than Connery's. As Connery's /i/ was lower than those of other SSE speakers this tells us very little of the relationship between an RP /i/ and SSE /i/.

It is then perhaps of some use to compare the RP values with those of another SSE speaker by way of a control.

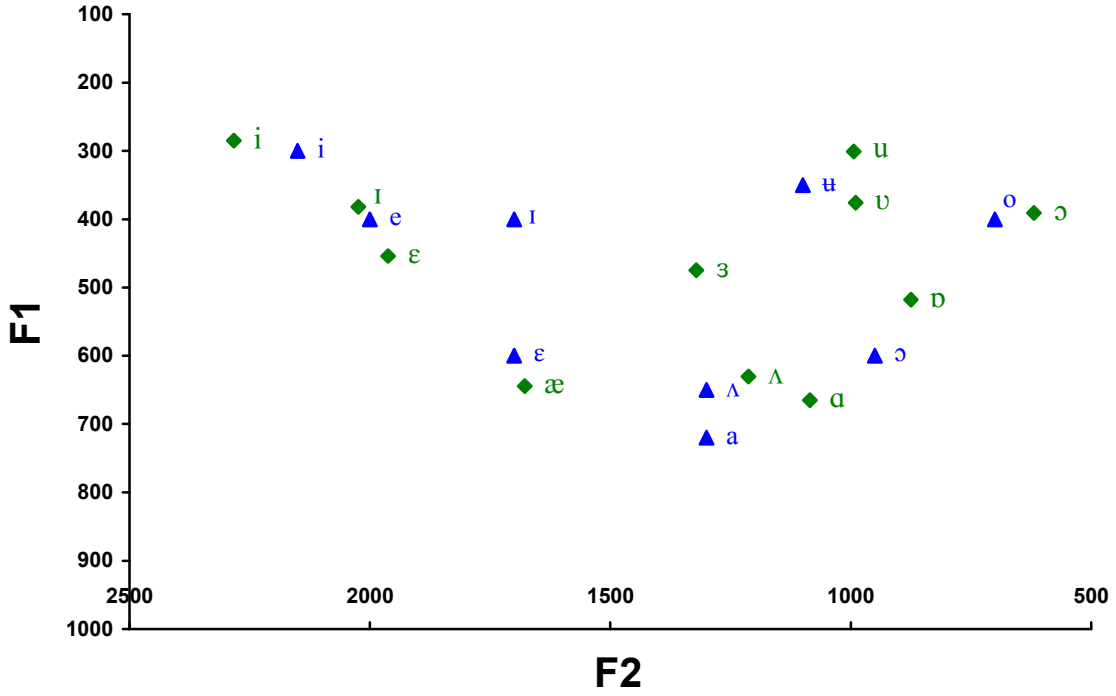

Figure 4.5

▲ Vowel formants for an SSE accent (posh Glasgow)

◆ Male, 65+, RP Vowel Phoneme Formant Values

Figure 4.5 shows the RP values alongside those of Fisk Here we see that the SSE /i/ does indeed tend to have a higher F1 value and therefore be produced lower than the RP version. This also seems to be the case for /ɪ/ which is produced both lower and further back in Connery and Fisk's accent than in RP.

It is interesting to note that both the RP /u/ and /ʊ/, which seem to differ primarily in height terms, are realised further back than Connery's /ʉ/. This may suggest that Connery's /u/ is typical of a SSE /ʉ/ and while not as far advanced as the /u/ reported by Chirrey in some Edinburgh speakers accents (1999:226), it does retain a quality recognisably SSE without backing so far as to be associated with RP or an even higher class SSE speaker (see Fisk above). Giegerich (1992:55) notes that though the SSE /ʉ/ is much further forward than in RP, it remains just as round. Engstrand (2004:99) explains that the degree of roundness is often indicated by low formant frequencies. Giegerich's observation is then borne out in

Fisk's values, however, Connery's /ʉ/ has slightly higher values and one may conclude that his /ʉ/ is perhaps less round than the RP equivalent(s).

Another distinction in RP is that between /æ/ and /ɑ/. It is claimed that the RP /ɑ/ corresponds to the SSE /a/ and moreover that the SSE /a/ is produced considerably further forward than its RP counterpart (Giegerich 1992:55). This certainly appears to be the case in Connery's pronunciation with his /a/ having a substantially larger F2 value, indicating frontness. It is true also of Fisk's values albeit to a lesser extent. This is perhaps indicative of his perceived 'posh' accent.[3]

In the realisation of his /ɔ/ phoneme, Connery once again exhibits a much lower vowel sound. The SSE /ɔ/ appears to be much lower in quality when compared to the RP pair /ɔ/ and /ɒ/. RP maintains a distinction between /ɔ/ and /ɒ/ while SSE collapses the pair and uses the phoneme which can be used in both open and closed syllables, namely /ɔ/.

When one compares Connery's values with RP and then compares Fisk's values with RP a picture emerges whereby Connery's values seem to exaggerate the differences between RP and SSE. Where Fisk's values display the expected and previously recorded differences between SSE and RP, the differences are even more obvious when looking at Connery's values. The fact that Fisk's vowel realisation shows a greater similarity to the RP system than Connery's may also indicate another important sociolinguistic factor that must be considered when looking at accents, namely that of education. Chirrey states that long term exposure to education may have a normalising effect on one's language. (1999:224). Fisk admits that his accent changed during his schooling when he attended a selective school in Glasgow. Connery on the other hand, did not have a formal education and left school at 13 to begin a string of manual jobs in and around Edinburgh. This may have influenced his accent in that it did not become as standardised as speakers who have spent a longer time in education.

[3] Donald Fisk provided me with a description of his accent through email correspondence.

3. Diphthongs

3.1 Comparison between SSE & RP – an overview

It is generally recognised the SSE has fewer diphthongs than RP. This is chiefly due to SSE being a rhotic variety of English and RP not. The loss of this rhoticity has resulted in RP creating diphthongs for syllables ending in historical /r/. In SSE the /r/ is normally pronounced and so there is no need for these extra diphthongs. ”The retention of underlying post-vocalic /r/ means that in comparison with many other accents of English, there are no centring diphthongs phonemically in words such as near, hair.” (Stuart-Smith 1999:205)

The diphthongs associated with the basic SSE vowel system (Giegerich 1992:55) are:
/aɪ/ /aʊ/and /ɔɪ/

These are to be found in words such as; <bite>, <down> and <coin>.

The diphthongs of the basic RP vowel system are:
/aɪ /aʊ/ /ɔɪ/ /ɪə/ /ɛə/ and /ʊə/

These are to be found in words such as; <bite>, <down>, <coin>, <beard>, <scarce> and <gourd>. (Giegerich 1992:45-46)

It would, however, appear that the situation concerning diphthongs in SSE is more complicated than presented above. Stuart-Smith (2003:116) notes that the Scottish diphthongs are often realised as [ʌɪ] [ʌu] and [ɔɪ] perhaps indicating that the first two diphthongs begin further back and higher up than those presented by Giegerich (1992:75).

Stuart-Smith presents the diphthongs of SSE as including /ʌʉ/ as in <out>, /əi/ as in <bite>, /ae/ as in <try> and /oe/ as in <voice>. This would seem to suggest a distinction within the single /aɪ/ diphthong presented by Giegerich.

Chirrey (1999:225) on the other hand, displays yet another slightly different alternative which she has observed in Edinburgh accents. The vowel system presented here contains four diphthongs; /ae/ /ʌi/ /ɔe/ /ʌʉ/ as in <prize>, <price>, <choice>, and <mouth>.Chirrey too has presented a distinction within the single /aɪ/ diphthong, claiming that while for some

speakers the words <price> and <prize> are minimal pairs, both containing the diphthong /ae/, others make a distinction in their pronunciation, pronouncing the former with /ʌi/ and the latter with /ae/. Chirrey provides a sociolinguistic explanation for this, i.e., some upper-middle class speakers will use the same diphthong for both words. (1999:226). Chirrey's findings therefore agree with Stuart-Smith's, the difference being that the Edinburgh <price> begins with an /ʌ/ as opposed to a schwa. The other contrast between Stuart-Smith and Chirrey is that Chirrey observes an [ɔe] in <choice> while Stuart-Smith observes an [oe] in words of this type.

The contrasting way of looking at the diphthongs of SSE outlined above and the limited material data under investigation in this paper make the analysis of diphthongs a complicated procedure. Nevertheless, I shall outline my findings based on acoustic analysis and phonetic speech analysis using a similar procedure to the one employed for the analysis of Connery's monophthongs.

Given Connery's Edinburgh roots, it is perhaps Chirrey's representation of diphthongs that will prove to be the most relevant for this paper.

3.2 Procedure

Sections of Connery's speech which contained words of interest were localised using Wavesurfer. Files were created for each of the diphthong sounds contained in these words. These sound files were then analysed using Praat spectral analysis. It was possible in most cases to analyse the data collected from a burg formant chart (see Appendix figure 1). The formant values at the beginning and the end of the diphthong were recorded on a table (see table 6).

In a number of instances (most notably for diphthongs containing low, back vowel frequencies) the burg formant chart could not register a value for the formants as the values were deemed too close. For these sound files the values were extracted using the sound edit feature to analyse the spectrogram or via manual reading of the formant curves charted on the spectrogram using Wavesurfer (see Appendix figure 2)

3.3 Results

The appendix contains the raw data for the vowel phoneme transitions observed in Connery's diphthongs (table 6).

3.3.1 Mean data and comparison with previous research

/aɪ/ /ae/ /ʌi/
<price> <prize>

Through calculating the formant frequencies at the beginning and end of this diphthong it should become more apparent which distinctions, if indeed any, Connery makes in his pronunciation of this diphthong. A selection of words which could contain either of these sounds was analysed.

The formant values for each of Jones' Cardinal Vowels are displayed in table 5 (see appendix). Cardinal Vowel C14, [ʌ] has an approximate value of F1= 550, F2 = 1150. CV4, [a] has an approximate value of F1 = 850, F2 = 1500. By comparing the values at the beginning of Connery's diphthong it should be possible to ascertain which phoneme best represents the start of the diphthong.

No conclusive picture emerges after analysis of the formant frequencies. Most realizations appear to fall somewhere between the values given for Jones' Cardinal Vowels. The diphthong in <hide> certainly appears to begin closer to the /a/ phoneme. However, when compared to Connery's own vowel phoneme values we find that this diphthong begins close to his realisation of /ʌ/ at around F1 = 675, F2 = 1193. Using the same procedure to analyse the end of the diphthong, we find it lies around CV2, [e] according to Jones' values.

It would seem that there may well be some variation in Connery's realisation of this diphthong. For his pronunciation of <five> (x2) and <AFI> (x2) his diphthong seems to resemble CV14, [ʌ]. For his pronunciation of <tonight> (x2) and <hide> the diphthong appears to start somewhere around CV4, [a] or CV11, [œ]. The diphthong shows more

consistency with where it ends. In all bar one case the diphthong ends between CV2, [e] and CV10, [ø]. Connery's values are similar to his realisation of /e/ or /ɛ/.

In <hide>, however it ends closer to CV1 indicating /i/. This alerts us to one of the other difficulties in analysing this diphthong that is the Scottish Vowel Length Rule (see section 5). This diphthong has been noted to be affected by the SVLR and so its qualities may alter depending on whether it is in a long or short environment (see Stuart-Smith 1999:207)

The limited amount of data under investigation prevents us from drawing any firm conclusions. However, we can say that there appears to be variation in Connery's /aɪ/ diphthong with it being realised as /ʌe /, /ae/ and /ai/.

Although these results may not clear up the confusion around this diphthong they certainly shed some light on why such confusion exists.

3.3.2 /ɔe/ /oe/

<choice>

This diphthong only occurs once in the material under study. It is present in Connery's pronunciation of <point>. As this diphthong begins with a low back vowel it is necessary to utilize the sound edit function in Praat before we can analyse the formant frequencies on the spectrogram.

On analysis of the results we find that Connery's realisation of this diphthong begins around CV13, [ɒ] on Jones' chart and that its formants are very similar to Connery's pronunciation of /ɔ/.

We also note that the diphthong ends with values corresponding approximately between Connery's /e/ and /ɛ/ values which also correlates to the approximate values for Jones' CV2, [e] and CV3, [ɛ].

We therefore can conclude that the diphthong realised in Connery's pronunciation of <point> is of the same quality observed by Chirrey in the accent of Edinburgh speakers, namely, /ɔe/.

3.3.3 /aʊ/ /ʌʉ/

<mouth>

Upon analysis of the data collected for this diphthong it becomes apparent that Connery produces a diphthong which begins at approximately the same region as CV14, [ʌ]. There is a good deal of consistency in the F1 figures however the same cannot be said for the F2 values. These figures point towards CV7, CV8, CV15 and CV16, that is, [o], [u], [ɣ], and [ɯ] . Once again, a larger corpus would certainly be needed before any firm conclusions could be drawn. There were only four words which were deemed suitable for analysis. Of these four words it is not entirely clear if <down> is stressed, <profound> may be affected by the proceeding voiced nasal and <Fountainbridge> contains a glottal realisation of /t/. Ideally, as with the monophthongs, the diphthongs would best be analysed as part of a controlled study of minimal pairs, however, this is the price paid for spontaneous speech.

If we generalise, we can say that Connery produces a diphthong of a quality similar to that observed by both Stuart-Smith and Chirrey in their respective studies of SSE in that it begins with a more central starting point. This too is recorded by Wells (1986:405). The diphthong put forward by Giegerich on the other hand seems to be an over generalisation of SSE in that he does not remark on the difference in quality between the SSE diphthong and the RP version /aʊ/.

3.4 Mean data and comparison with Giegerich (1992:75)

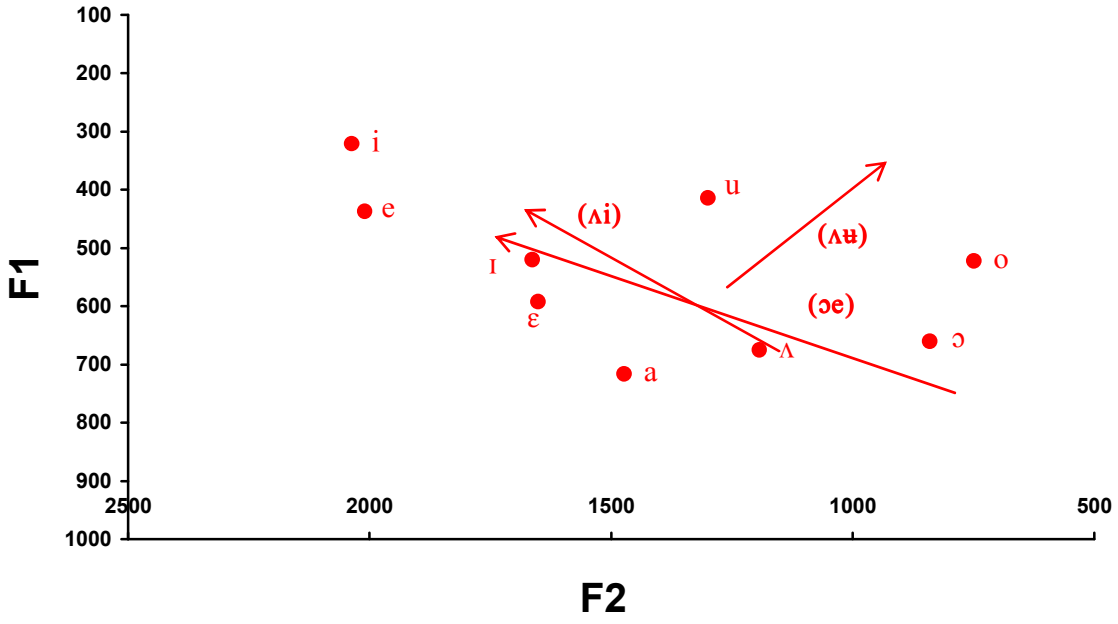

Figure 5

Connery's Vowel System

● Connery's Vowel Phoneme Formant Values

—— Connery's Diphthongs

Figure 5 above differs from Giegerich's schematic representation of typical realisations of Scottish Standard English vowel phonemes (Giegerich 1992:75) in that it clearly shows the more central character of the diphthongs /ʌi/ and /oe/ as opposed to /aɪ/ and /ɔɪ/. Connery's /ɪ/ also lies lower than that displayed by Giegerich. These points aside the diagrams vary only in minor details from one another.

4. Vowel Breaking

It has been noted that in the English of Edinburgh speakers the phenomenon of vowel breaking can arise (Chirrey 1999:225). This phenomenon is described as follows, "…the vowel in a syllable being followed by a brief transitional vowel glide of an /ɪ/ quality, e.g.

/tɹe-ɪl/ trail." (Chirrey 1999:225). This phenomenon tends to arise when the vowel precedes, /r/, /l/ and /n/ and was also noted in Glasgow accents by Stuart-Smith (1999:208) so could be considered a general SSE feature.

During the course of the analysis into formant values and vowel length it was not apparent that vowel breaking was a common feature of Connery's accent. However, a glide can be detected in the words <start> and in one realisation of the word <deal>. Perhaps a more extensive study would reveal if this is a common feature in Connery's speech.

5. SVLR (Aitken's Law)

The problem faced for this limited study of Connery' speech is its size and to a certain degree its nature, considering that the material focuses on spontaneous speech. Ideally, a study of the SVLR would be conducted under laboratory conditions with the subject producing a list of minimal pairs. This would reduce the amount of variables that may affect the quality of the results. The speech under analysis lasts 5 minutes and 34 seconds and comprises 466 words. This is sufficient for a general analysis of Connery's speech, however, a significantly larger corpus would be required in order to analyse with greater accuracy evidence of the SVLR in Connery's accent. Nevertheless, I shall outline the basics of the SVLR and attempt to draw some conclusions from the analysed data.

Giegerich (1992) notes that according to the SVLR, all vowels in SSE are realised short except before voiced fricatives, /r/ and word boundaries where they are realised as long. Giegerich furthermore points out that this applies to all vowels except /ɪ/, /ɛ/ and /ʌ/ which are always realised as short. It is also argued (see Wells 1986:405) that the diphthong /aɪ/ is subject to the SVLR.

Scobbie, Hewlet and Turk (1999:230-245) have done much research into this area and recorded durational evidence for the SVLR. In this section I also intend to identify the SVLR in action through durational analysis of vowels which should be affected by the SVLR.

5.1 Procedure

Wavesurfer was used to localise individual words which were deemed to be of interest for this section of the study. A selection of words containing the same vowel though not in an SVLR context was also compiled so that vowel length could be compared in different environments. Praat was used to generate a spectrogram of these words, this allowed the vowel sounds to be analysed visually as well as acoustically thus improving accuracy. A time indicator at the bottom of the screen allows the researcher to pinpoint the start of the vowel and locate where it ends. Once the desired area has been selected the duration can be read off of the screen. In figure 6 below the /u/ from Connery's pronunciation of <movies> has been selected. The bottom half of the screen shows the spectrogram where the vowel can be clearly seen (indicated by the dark region). The duration of the vowel is registered at the top and bottom of the screenshot (here 0.1722 sec).

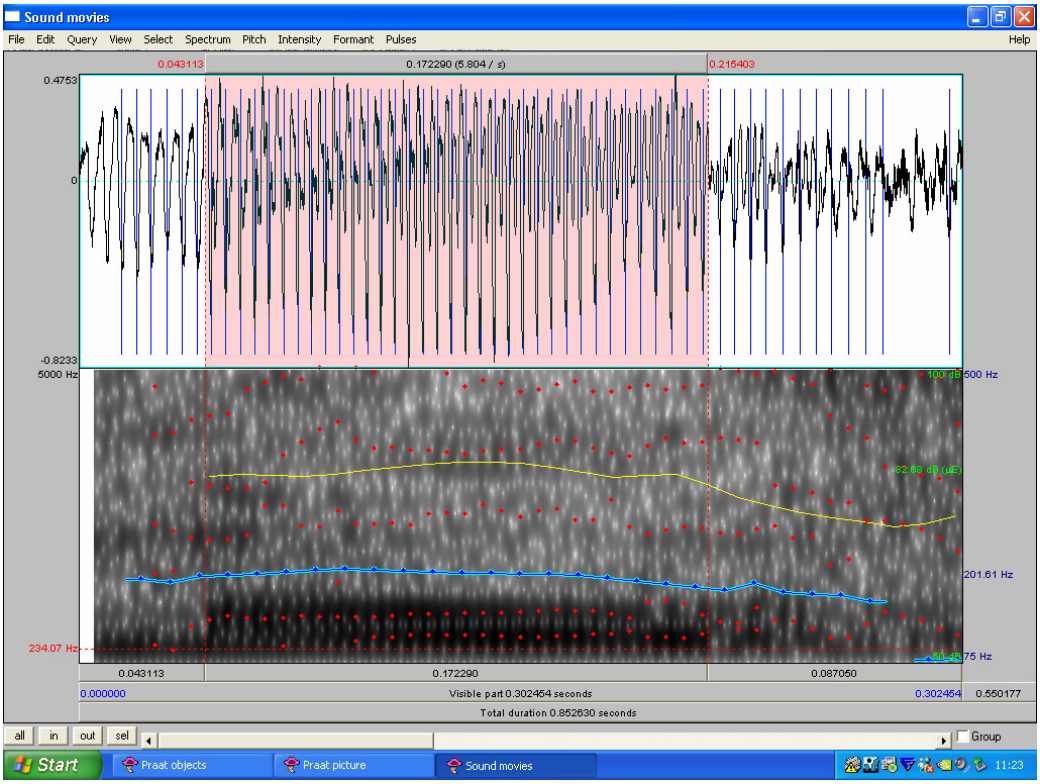

Figure 6. Praat screenshot analysing the /u/ vowel in <movies>

5.2 Results

The appendix contains tables (tables 7.1 and 7.2) detailing the results of the durational analysis.

5.3 Analysis

As stressed earlier, one must be cautious when drawing conclusions based on a limited amount of data, however, a pattern begins to emerge that would appear to support Aitken's Law when Connery's vowels are analysed.

This is most apparent for the /i/ and /ʉ/ vowels and there is marginal support for the /e/ and /a/ vowels. The SVLR is also claimed to affect the diphthong /aɪ/ and there appears to be evidence to support this in Connery's pronunciation.

Once again the low back vowels /ɔ/ and /ɔ/ proved difficult to interpret. With many of the occurrences containing these vowels it is not entirely clear if they are in a stressed syllable or not. An unstressed vowel is prone to deviate from its normal position and therefore cannot be relied on when collecting evidence of this sort. This is the problem with words such as <because>, <lots>, <not> and <both>. It is not surprising then that the results for these particular words produce results contrary to those one would expect to find. The results for these particular vowels then must be regarded as inconclusive.

The vowels which Giegerich (1992:56) states are always realised as short, namely /ɪ/, /ʌ/ and /ɛ/, were also analysed for evidence of lengthening in an SVLR environment. It was found that there was no evidence that the lengths of these vowels were affected by their environment.

While the limited size of the data being analysed means that no firmly conclusive results can be drawn, it would appear that certain vowels are more affected than others by their environment. It is perhaps then not surprising that the vowels found most strongly to support the case for the SVLR, /i/, /e/ and /ʉ/ are also among those which are most strongly associated with the Scottish accent.

6. Consonant features

Having dealt with the vowel system of SSE in some detail we will now move on to analysing some consonant features which one would expect to find in an SSE accent and assess to what degree they are in evidence in Connery's accent.

6.1 Dark /l/

A feature strongly associated with SSE is the abundance of dark /l/. It is said that /l/'s are realised as dark in SSE, "Scottish English does not exhibit the alternation of clear and dark /l/ found in, say, RP. Any given speaker tends to use much the same kind of /l/ in all phonetic contexts. Most commonly this is a velarised variety, [ɬ]." (Wells 1982:411). Wells does however go on to indicate that some middle-class speakers may realise an /l/ as clear /l/ where it would be clear in English English. The degree of velarisation appears to depend on the environment in which the /l/ appears. Chirrey notes that dark /l/ is prevalent in Edinburgh English and realised primarily as a close or close-mid back vowel.

6.1.1 Procedure

In order to ascertain if Connery produces a dark or clear /l/ all the words containing this consonant were identified and sound files were created for them using Wavesurfer. The words were then categorised based on the position of the <l> consonant, i.e., word-initial, intervocalic and word-final positions. I first relied on my own ear in order to categorise the type of /l/ I heard and then analysed the /l/ sound using Praat speech analysis software.

/l/ can be analysed in much the same way as the monophthongal vowels were using this software. Formant values for a variety of /l/ realisation within English have been recorded by Fisk. Formant values for /l/ are also found in the research of Oxley et al (2006).

6.1.2 Results

The appendix includes a table (table 8) showing formant values recorded for Connery's /l/.

6.1.3 Analysis

Upon listening to the various occurrences of /l/ in Connery's speech, it appeared as though there was little variety between them. All /l/ realisations appeared voiced and dark in nature. For a more objective analysis I turned to the results of the formant analysis. This confirmed that there was indeed little variation in the type of /l/ Connery produced and also illuminated the type of dark /l/ produced. Connery appears to produce an /l/ with an F1 value of around 300-400Hz and an F2 value that varies between 600-900Hz. This is indicative of both a

velarized /l/ (F1 = 380, F2=920) and a pharyngealized /l/ (F1 =400, F2=800) according to the values recorded by Fisk (source). There are only three occasions when Connery appears to produce a clear /l/, two of these are intervocalic, <talented>, <Michelin> and the third is word-initial, <life>. In the work of Oxley et al (2004) it was found that the F2 value of speakers of American English also rarely reached 1000Hz which they concluded supported the view that speakers of General American English (GAE) tend to produce dark /l/ too. These results appear to confirm that Connery does indeed produce a dark /l/ most of the time.

6.2 Rhoticity

6.2.1 Background

In her study into the Edinburgh accent, Deborah Chirrey notes that Edinburgh English like other varieties of Scottish English, remains rhotic. However, she points out that as Edinburgh is in general more middle class than most areas of Scotland, the tendency is towards more standard varieties of English than in other areas of Scotland. (Chirrey 1999:224). This may suggest that the degree to which Edinburgh English is realised as a rhotic depends largely on the social class of the speaker.

Stuart-Smith notes that loss of post-vocalic/r/ has been reported in both the speech of working-class Edinburgh children and working-class Glasgow children. Moreover, she describes that middle-class speakers tend to produce more retroflex varieties while working-class speakers tend to produce more taps (Stuart-Smith 1999:210)

Chirrey notes that /r/ is produced in word-initial, medial and final position often resulting in consonant clusters absent from many EngE accents, e.g., <girls>, <firm>, <world> (1999:228). When analysing Connery's pronunciation of /r/, these three positions will be used to divide the words under investigation.

6.2.2 Procedure

Sound files were compiled for each of the words containing <r> which were then analysed to ascertain which type of /r/ if indeed, any, was produced.

The results of the analysis were then compiled in a table (see table 9) which can be found in the appendix. The words are ordered to show the environment in which /r/ occurs. There is a distinct lack of instrumental data when it comes to the production of /r/. Fisk provides us with some formant values suggesting analysis could be conducted in a similar way to vowel and /l/ analysis. However, there is little for a researcher to compare their data to, so on this occasion I have relied entirely on my own interpretation of the /r/. For a more accurate analysis more auditory and acoustic investigation is needed.

6.2.3 Varieties of /r/

The production of /r/ can take many forms. It can be 1) *a tap*, as in <hurry> and is represented by an [ɾ] sign /hʌɾe/. It can be 2) a *postalveolar approximate* represented by [ɹ]. It may be realised as 3) a *trill*, [r] which is rare and a miscomprehension of /r/ in SSE (see Pedersen; (2004)). This realisation of /r/ appears on occasion in word initial stressed position possibly for emphatic purposes. 4) A *retroflex approximant* [ɻ] is often found in word final position or after vocalic clusters such as in <fur> or <heard>. This variety of /r/ is as Chirrey points out, common to older speakers or those who have more Scots phonology and as noted above, working-class speakers. When this happens, often the /s/ or /z/ takes on a retroflex realisation/flavour as in <Kirsty>, <years> etc.

6.2.4 Analysis of Connery's /r/

Upon analysis of Connery's speech we find that most, if not all of his /r/'s are realised as either 2) or 4) above i.e. postalveolar approximants or retroflex approximants. This is perhaps not surprising in the case of post alveolar approximants. Chirrey notes in her study that this is in fact the most common type of /r/.

The retroflex approximant is more interesting as this seems to be an intricate part of his accent. This is because of the effect it has on the phonemes in its environment. With the words, <winners> and <losers> one can clearly hear a retroflexive realisation of the voiced alveolar fricative [z]. The same is true for his pronunciation of the consonant [s] which is realised almost always as [ʃ] and could be mistaken for a speech impairment such as a lisp if it was not for the fact that Connery also produces a clear /s/ on occasions (usually in a word-initial or mid-vocalic position such as in <suddenly> or <is either>). This suggests that there

is something more systematic in nature about it. This type of /s/ is common not only to Scots but to Irish too (Reese 1993) and Connery may have been influenced here by his father's Irish roots. It is also interesting to note that this anticipatory retroflexive /s/ or /z/ has also been recorded in General American English, which like Edinburgh English is also rhotic. This /s/ is especially common in the southern states where it has even been observed in word-initial position. (Stahlke 2006:56).

Curiously, there does not appear to be any evidence of consonant clusters forming as a result of a voiced /r/. When Connery utters the word <work> for example, it does not form the consonant cluster which would suggest a postalveolar approximate. Chirrey does however note that these clusters tend be avoided by middle-class speakers. (Chirrey 1999:228)

There is a hint of a trill in <industrious> which is stressed for effect in the speech and so conforms to the use of trills outlined above. However, trills are uncommon in Connery's speech and even when words beginning with /r/ are stressed for emphasis such as <realise> there is no evidence of a trill.

An alveolar lateral flap/tap can be heard in quick succession in <These are all….I find admirable> and <a very hard working>. As the /r/ appears here surrounded by vowels, once again Chirrey's observations are vindicated.

7. Alveolar fricatives [s] [ʃ] [z] [ʒ]

Connery's pronunciation of /s/ is often mocked and no investigation into his accent would be complete without touching on its significance. While it could be interpreted as a lisp of sorts this may be unfair to Connery. Where his /s/ is certainly realised frequently as [ʃ] (the same applies to the voiced /z/ being realised as [ʒ]) this is not the case all of the time which would suggest that there may be something more systematic in its realisation as [ʃ].

The consonant [s] is usually described as being an alveolar fricative in English. However, a distinct feature of Connery's speech is his realisation of this phoneme as a retroflex /s/, [ʂ] which is realised with the tip of the tongue being turned back towards the hard palate. This results in its pronunciation being similar in nature to [ʃ] and also gives rise on occasions to an

almost whistle-like sound in Connery's /s/. The voiced alveolar fricative [z] seems also subject to this peculiar pronunciation attribute in that it too takes on a quality more similar to /ʒ/.

This may be a remnant of the influence of Scots and may be a result of the Irish influence over Connery's English. This /s/ which is frequently found in Swedish, Norwegian and Gaelic (Reese 1993) is also discussed by Stuart-Smith in her investigation into Glaswegian. She notes that the occurrence of this consonant (described as 'cacuminal') may, but does not always, indicate a protruding jaw during articulation. Furthermore, from a sociolinguistic perspective, the presence of this pronunciation was found to be most commonly present in male speakers, particularly boys and was present in both WC and MC speakers. (Stuart-Smith 1999:209).

Furthermore this retroflex /s/ appears to be common in GAE probably because it, like SSE, uses a rhotic realisation of /r/ almost exclusively. The retroflex /s/ is anticipatory in nature in that it is detected prior to any other retroflex consonant. This /s/ can occur in word initial position but is not solely restricted to this position. As Stahlke (2006) points out, it has been observed in syllabic clusters such as 'treasure', and spanning intervening consonants as in 'sprain' or 'strain'.

When listening to Connery's speech the abundance of /ʃ/ sounds is obvious, yet there are around nine occasions where the /s/ or /z/ are produced as clear alveolar fricatives. These are in <nervou**s** as>, <**s**incerely>, <friend**s**>, <memorie**s**>, <enthu**s**iastic>, <i**s** either>, <you **s**ee>, <**s**uddenly> and <**s**uppose>. These appear to be mostly between vowels, such as the first /s/ in the word <enthusiastic>. However, when /s/ appears before a stop it is always realised in a retroflex manner, as appears to be the case with the second /s/ in <enthusiastic>.

8. T-Glottalling

Wells (1986:409) points out that /t/ glottalling (in the non-initial position) is a popular feature of Scottish English. Giegerich (1992:225) however, stresses also that, "although the glottal stop is frowned upon by conservative RP speakers, it is found sporadically … in casual speech in most varieties of English." /t/ glottalling is furthermore associated to social class, sex and the context in which the speaker finds him/herself. Consequently, it has been

discovered that this phenomenon is common amongst working class men in an informal setting (see Stuart-Smith 1999:211).

In the Connery speech under analysis, there is evidence of t-glottalling, which would seem to lend weight to the argument that Connery speaks with a SSE accent as opposed to an RP accent. Given Connery's working class background this may not be surprising, however one must remember that Connery is speaking publicly in front of a group of his peers during a formal award ceremony which is being broadcast live to the American general public. In such circumstances one may expect Connery to be guarded over his pronunciation, however, as pointed out in the introduction, he appears very relaxed and this is an obvious emotional occasion for him.

At the start of the speech Connery employs the glottal realisation of /t/ in the word <getting>. Other glottal /t/'s appear in: <that this>, <just had>, <but not>, <but the AFI>, <admit that>, <brought back>, <start, my>, <didn't know>, <got my>, <Fountainbridge>, <great lunch>, <isn't the>.

Glottal realisations of /t/ seem common before voiced fricatives, e.g. <but the>, or nasals, and often in word-medial position (See Chirrey 1999:226). The most noticeable glottal realisation of /t/ occurs in his pronunciation of <Fountainbridge>. This is the part of Edinburgh which he regarded as home and it is hard to think of anyone from that area pronouncing the /t/ clearly.

Most of the other occasions Connery uses [t] as in: <bit.>, <Mister Stringer>, <list of>, <moment.>, <tonight.>, <achievement.>, <it looked>, <lots>, <industrious>, <enthusiastic>, <qualities>, <rest of>, <shit uphill>, <tonight I>, <that.>, <seventy years>, <that profound>, <left school>, <thirteen.>, <didn't have>, <tonight.>, <scripts>, <feet are>, <heart is>, <first agent.>, <shit.>, <point.>, <tonight.>, <good night.>

This realisation of /t/ appears common at the end of a sentence or before a pause (in _# position). It also occurs frequently before or after an /s/ especially during points where the speech seems memorised.

There are a few occasions when Connery uses another type of /t/, a tap [ɾ]. This again is very typical of SSE and common to GAE too. It occurs in the following; <bit nervous>, <beautiful wife>, <was sitting>.

These seem to be used as 'asides' or after thoughts and always occur mid-sentence. With a little less care they could be realised as glottal.

9. Summary of findings

Analysis of Connery's vowel system shows that he realises less vowel phonemes than an RP speaker. This is generally the case with SSE and therefore not surprising. The nature of the basic SSE vowel system in relation to an RP vowel system is revealed through the analysis of formant values. When Connery's and indeed any of the SSE vowel systems are compared to the RP system from Midgley's study, certain key differences become apparent.

Many of the SSE vowels are lower in quality in relation to their RP counterparts. The SSE /a/ is further forward than the corresponding RP equivalent. This is indicated in RP by the separate phonetic symbol /ɑ/. While the SSE /ʉ/ tends not to vary in terms of height and therefore roundness in relation to RP's corresponding phoneme, the SSE /ʉ/ appears to be much further forward in nature. The SSE /ɔ/ is also conspicuous in that it is so much lower and further forward than the RP equivalent.

In section 2.4 Connery's vowel system is compared to that of three other SSE speakers, each representing a different class. This reveals some telling differences within SSE which help us further define Connery's accent. The results appear to show that Connery's vowels reveal a lower system compared to the other SSE systems. It is almost as if his vowel system exaggerates the differences found between SSE and RP. There are some interesting variations which may reveal something about Connery's background. Connery's /a/ and /ʉ/ are much further forward than the middle-class versions which may be indicative of social status. Connery's /ɪ/ too appears to be quite peculiar in nature when compared to the other SSE studies. While his /ɪ/ has a similar F1 frequency and therefore front quality, it is however considerably lower than the middle-class realisations yet higher than the working-class version.

Due to the rhotic nature of SSE and the non-rhotic nature of RP we find more diphthongs in RP English. SSE is limited to 3 basic diphthongs, though research suggests this may vary (see Stuart Smith (1999) & Chirrey (1999)). The analysis of Connery's diphthongs shows that while he too limits himself to 3 diphthongs there may be some variety within his /au/ and /aɪ/ diphthongs. Nevertheless, his diphthongs do all appear to share a much more central starting point than those of RP.

Dark /l/ is widely reported to being associated with SSE and it seems clear from this study that Connery almost exclusively uses this pronunciation.

It was found too that Connery almost exclusively uses a post-alveolar approximate [ɹ] in his pronunciation and rather curiously, a retroflex realisation which is also indicated by the peculiar and obvious realisation of /s/ and /z/ which may be retroflex variants giving Connery a distinctive pronunciation.

10. Conclusion

The hypothesis of this study was that Connery would be found to speak a modified version of Scottish Standard English, perhaps having been influenced from his time abroad and the film industry in which he works. However, this investigation has shown that there is evidence to suggest that Connery does in fact speak a variety of SSE which is true to the accent found in Edinburgh and reveals much about his background.

Connery's basic vowel system has been shown to include the nine vowel phonemes attributed to SSE. Although analysis of Connery's diphthongs was limited due to the size of this study, there is evidence that the quality of his diphthongs reflects that noted in previous studies of the Edinburgh accent. Furthermore, there is also evidence that Connery's vowels are subject to Aitken's vowel lengthening rule.

From a sociolinguistic perspective, the results are quite interesting. While Connery's vowel system strongly identifies the speaker to be of Scottish origin the social status of his accent remains slightly unclear. There is evidence in the frontal quality of Connery's /ʉ/ to indicate his working-class roots. This is supported further still by the relatively low position of his /ɪ/.

While the front nature of Connery's /a/ may suggest the converse to be true according to Stuart-Smith's observations, it does resemble the quality of the working-class /a/ that she recorded in Glasgow more than the middle-class versions. The fact that Connery's vowels appear to have a low quality to them may also be interpreted as revealing a little of his working-class origins. Stuart-Smith noted a similar relationship between the vowel system of working-class speakers and middle-class speakers in Glasgow. She explains this difference as follows, "The retraction (and lowering) of vowels can be explained as the result of a backed tongue body setting, perhaps with pharyngealization, in WC speakers." (Stuart-Smith 1999:205). More evidence for this pharyngealization may be detected in the variety of dark /l/ that Connery produces.

Connery exemplifies the rhotic nature of SSE in his realisation of /r/ almost exclusively as a post-alveolar approximate /r/ and occasionally a tap. However, it is his retroflex realisation of /r/ that is most interesting as it affects the quality of the consonants in its environment. It also may be an indicator of the Irish influence over Connery's accent.

The presence of an anticipatory retroflex variety of /s/ and /z/ may have its roots in the Scots tongue, though it has also been observed in the southern states of the US (See Stahlke, 2006). However, without further investigation the possibility that this may be a lisp of sorts cannot be ruled out entirely.

Although not present to a great degree, the glottal realisation of /t/ is present in Connery's accent. As we noted earlier, t-glottalling is not confined to SSE and may even be regarded as gaining in popularity, however it does have associations with class. Speakers tend to be male with working class backgrounds and employ /t/ glottalling in informal situation.

The surprising fact that Connery's accent appears to be so typical of his background may be explained to some degree by the fact that it did not undergo the normalisation process that a formal education may affect. Further still it may be explained by his own pride in his origins. It would seem that Connery's statement on accents, "to cultivate an English accent is already a step and a departure away from what you are…your own background and environment is with you for life. No question about that," does indeed ring true in his case.

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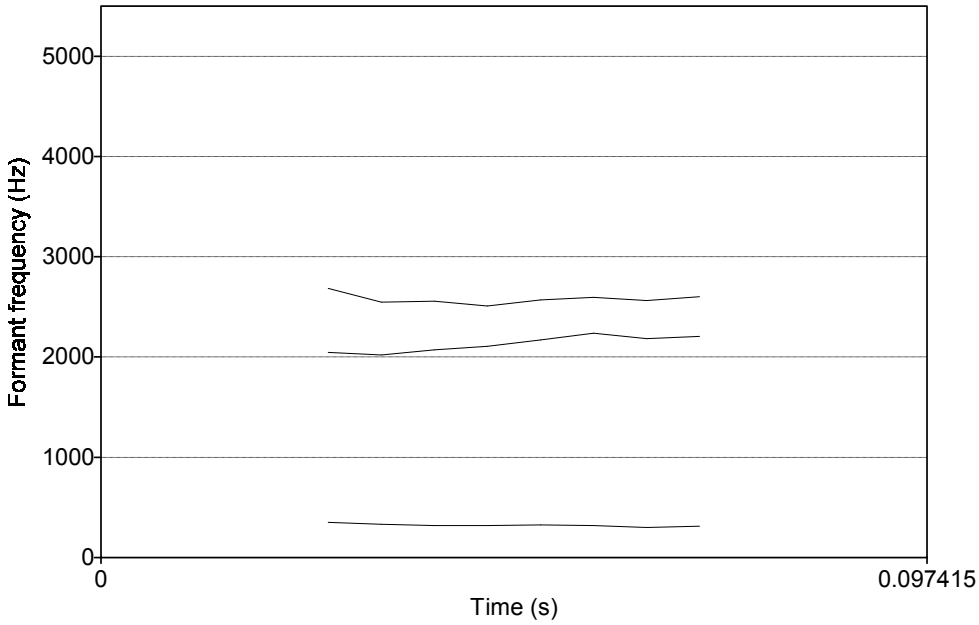
Appendix



Time	F1	F2	F3
0.026832	350.84	2045.6	2683
0.033082	330.33	2019.2	2545.9
0.039332	317.73	2070.5	2558
0.045582	318.68	2104.7	2508.5
0.051832	324.39	2171.9	2570.2
0.058082	319.22	2236.7	2593.7
0.064332	297.86	2183.7	2564
0.070582	314.25	2204.3	2601.3

Figure 1

Extracting formant values for /i/ using Praat
(By drawing a Burg formant track chart and then generating a numerical table formant values can be recorded)

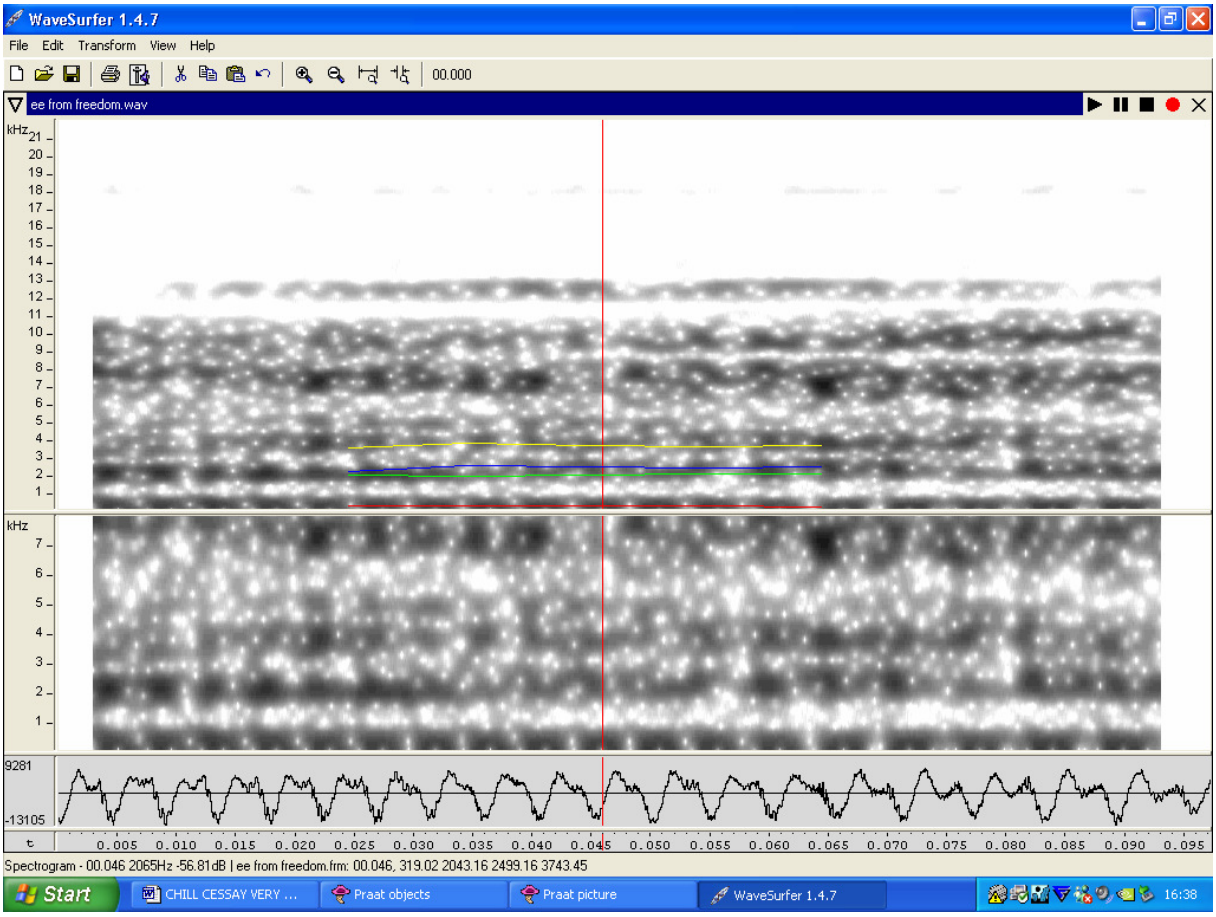


Figure 2

Extracting formant values for /i/ manually using Wavesurfer.

(The four coloured lines in the top section indicate F1-F4 values. By placing the cursor on these lines their values can be recorded.)

Table 1

Mean Formant Values for Connery's Accent

Vowel	Word Group	F1	F2	F3
/i/	Freedom	321	2037	2776
/ɪ/	Terrific	520	1663	2645
/e/	Break	437	2010	2582
/ɛ/	Memories	592	1651	2490
/a/	Happy	716	1473	2357
/ʌ/	Fun	675	1193	1824
/ɔ/	Brought	660	840	2669
/o/	Both	501	723	2475
/ʉ/	Good	414	1300	2395

Table 2

Vowel Formants for a Scottish Accent (Fisk, D. 2006) retrieved from internet http://web.onetel.net.uk/~hibou/Formant%20Speech%20Synthesizer.txt

Vowel	Word	F1	F2	F3
/i/	Beat	300	2150	3050
/ɪ/	Bit	400	1700	2300
/e/	Bait	400	2000	2350
/ə/	Shepherd	580	1420	2250
/ɛ/	Bet	600	1700	2300
/a/	Bat	720	1300	2200
/ʌ/	But	650	1300	2050
/ɔ/	Bought	600	950	2100
/o/	Boat	400	700	2200
/u/	Boot	350	1100	1950

Table 3

Mean Formant Values for Received Pronunciation. Male subject, 65+. (Hawkins & Midgley 2005)

Vowel	Word Group	F1	F2
/i/	Heed	285	2283
/ɪ/	Hid	382	2024
/ɛ/	Head	454	1962
/æ/	Had	644	1678
/ɑː/	Hard	665	1085
/ɒ/	Hod	518	875
/ɔː/	Hoard	391	619
/ʊ/	Hood	376	990
/uː/	Who'd	301	994
/ɜː/	Herd	475	1321
/ʌ/	Hud	630	1213

Table 4

Vowel formant frequencies for Connery (raw data)

PHONEME	WORD	F1	F2	F3
/a/	Talented	862	1383	2453
	Standing	675	1573	2437
	Happy	709	1376	2198
	Fantastic	679	1446	2411
	Lacked	727	1458	2459
	Family	693	1412	2186
/ʌ/	Fun	751	1209	2397
	Industrious	696	1485	2388
	Lunch	620	1557	3138
	Shovel	824	936	2231
	Young	868	921	1777
/ɔ/	Auspicious	466	1133	2633
	Called	515	1406	2820
	Honour	796	2115	3234
	Long	524	788	2871
	Qualities	549	626	2158
/o/	Utopia	559	611	2531
	Own (1)	533	875	2200
	Own (2)	421	730	2285
/ʉ/	Books	494	988	2415
	Who'd	342	1222	2349
	Good (1)	416	1433	2137
	Good (2)	462	1601	2218
	Childhood	392	1469	2466
	Would	381	1090	2788
/i/	Freedom	321	2138	2539

	Read	281	2138	2749
	People (1)	345	2045	2645
	People (2)	324	1806	2917
	Thirteen	337	2062	3032
/ɪ/	Scripts	508	1594	2532
	Terrific	526	1921	2702
	Shit	540	1637	2579
	Simple	506	1500	2769
/e/	Blame	385	2115	2497
	Making	638	2100	2695
	Break (1)	424	2086	2627
	Break (2)	446	2062	2294
	Taken	435	1763	2601
	Great	415	2024	2783
/ɛ/	Memories (1)	602	1764	2202
	Memories (2)	621	1596	2792
	Seventy	567	1559	2627
	Friends	580	1687	2340

Table 5

Cardinal Vowel Values from Daniel Jones by Fisk

UNROUNDED				ROUNDED			
Cardinal Vowel	**Phoneme**	**F1 (Hz)**	**F2 (Hz)**	**Cardinal Vowel**	**Phoneme**	**F1 (Hz)**	**F2 (Hz)**
CV1	/i/	300	2250	CV9	/y/	300	2050
CV2	/e/	400	2000	CV10	/ø/	400	1750
CV3	/ɛ/	550	1700	CV11	/œ/	550	1400
CV4	/a/	850	1500	CV12	/ɶ/	650	1200
CV5	/ɑ/	620	950	CV13	/ɒ/	620	900
CV14	/ʌ/	550	1150	CV6	/ɔ/	550	900
CV15	/ɣ/	400	1100	CV7	/o/	400	700
CV16	/ɯ/	300	1100	CV8	/u/	300	550
CV17	/ɨ/	300	1700	CV18	/ʉ/	300	1300

Table 6

Connery's Diphthong Formant Values

DIPHTHONG		WORD	F1	F2
/aɪ/	START	AFI (1)	662	992
	STOP		441	1764
	START	AFI (2)	551	992
	STOP		441	1874
	START	Tonight (1)	662	1544
	STOP		441	1764
	START	Tonight (2)	662	1213
	STOP		331	1874
	START	Five (1)	662	1103
	STOP		441	1985
	START	Five (2)	662	1103
	STOP		331	2095
	START	Hide	772	1323
	STOP		331	2205
/ɔi/	START	Point	658	798
	STOP		487	1866
/au/	START	down	662	1433
	STOP		441	1213
	START	Profound	551	1103
	STOP		331	1103

	START	Fountainbridge	551	992
	STOP		331	992
	START	Howard	662	1323
	STOP		331	662

Vowel Length Duration – Affected vowels - Raw data

Table 7.1

SVLR CONTEXT			**NON-SVLR CONTEXT**		
Vowel	**Word**	**Length**	**Vowel**	**Word**	**Length**
i	Received	0.1815	i	People 1	0.0728
	Achievement	0.1383		People 2	0.0728
	Pleased	0.2113		Freedom	0.0918
	Believe	0.2159			
	Evening	0.1306			
e	Compare	0.1067	e	Blame	0.0997
	Plays	0.3022		Break 1	0.0811
	AFI	0.1945		Break 2	0.1409
a	Start	0.1959	a	Academy	0.1059
	Hard	0.2014		Happy	0.0869
	Father	0.1802		Talented	0.1193
				Lacked	0.1064
ɔ	Awards 1	0.1713	ɔ	Brought	0.1059
	Awards 2	0.2170		Auspicious	0.0638
	Formal	0.1254		Lots	0.1652
	because	0.0960		Not	0.1738
o	Chosen	0.1202	o	Utopia	0.0740
				Both	0.1583
ʉ	Losers	0.1566	ʉ	Looked	0.0709
	Movies	0.1722		Good	0.1060

				Books	0.0884
aɪ	Five 1	0.2519	aɪ	Wife	0.1855
	Five 2	0.4353		Life	0.1218
	Realize	0.2298		Like	0.1536
	Afi 1	0.5459		Hide	0.2688
	Afi 2	0.5750		Tonight 1	0.2396
				Tonight 2	0.2216

Table 7.2

Vowel Length Duration – Unaffected Vowels - Raw data

SVLR CONTEXT			**NON-SVLR CONTEXT**		
Vowel	**Word**	**Length**	**Vowel**	**Word**	**Length**
ɪ	Given	0.0962	ɪ	Shit	0.1095
				List	0.0879
ɛ	Nervous	0.1495	ɛ	Less	0.1222
	Learned	0.1187		Rest	0.0529
				Left	0.0934
ʌ	Shovels	0.1140	ʌ	Industrious	0.1043
	Shovelling	0.0760		Lunch	0.0963

Dark /l/

Table 8.1

/l/ in Word Initial Position

Word	**F1**	**F2**	**F3**
List	337	673	2946
Losers	332	662	2536
Lots	326	760	2878
Less	281	751	2440
Lacked	331	772	2536
Long	331	551	2646
Lunch	331	662	1874
Life	414	1252	2549

Like	403	938	2588
Looked	378	1028	3037
Learned	441	662	2646
Left	331	772	2536
London	488	717	2583

Table 8.2

/l/ in Intervocalic Position

Word	**F1**	**F2**	**F3**
Family	441	772	2095
Talented	585	1135	2342
Qualities	554	1020	2329
Realise	441	772	2646
Believe	331	772	2426
Michelin	391	1180	2477

Table 8.3

/l/ in Word final Position

Word	**F1**	**F2**	**F3**
Hell	441	882	2315
People 1	288	863	2876
People 2	491	636	2756
Uphill	441	772	2523
Formal	368	980	2477
Well	496	768	2568
Deal 1	331	992	2536
Deal 2	331	662	2646

Table 8.4

/l/ Others

Word	**F1**	**F2**	**F3**
Called	438	775	2643
Blame	465	993	2641
Shovels	508	1204	2726
Childhood	501	779	2702
Plays	518	843	2810
Else	441	992	2315

Table 9

/r/ environments and realisations

/r/ Environment	Word	/r/ Realisation
Word-initial	Who'd received	/ɹ/
	The rest	/ɻ/
	To realize	/ɹ/
	To read	/ɾ/
	And remember the..	/ɹ/
Word-end position	Mr Stringer	/ɹ/
	Honour.	/ɹ/
	There are winners	/ɾ/
	Other people	/ɹ/
	Your on your own	/ɾ/
	Here and & here too	/r/ & /ɹ/
	Are on	/ɹ/
	Together	/ɹ/
	more than	(unclear)
	Where I was…	/ɹ/
	Either a	/ɹ/
	Our shovels	/ɹ/
	Compare it…	/ɹ/
	Mother and	/ɹ/
	Father.	/ɹ/
	Older than	/ɹ/
Mid-vocal position	Sincerely	/ɹ/
	Terrific	/ɾ/
	Memories (x2)	/ɾ/
	Admirable	/ɾ/
Others	Award	/ɹ/
	Nervous	/ɹ/

	Awards	/ɹ/
	Winners	/ɹ/
	Losers	/ɹ/
	Bringing	/ɹ/
	Friends	/ɹ/
	Children	/ɹ/ or /ɻ/
	Pretty	/ɹ/
	Brought	/ɹ/
	Industrious	/r/
	Start	/ɻ/
	Freedom	/ɹ/
	Great	/r/
	Break	/ɹ/
	Years	/ɻ/
	Learned	/ɹ/
	Profound	/ɹ/
	Formal	dropped
	Scripts	/ɻ/
	Journey	/ɹ/
	Fountainbridge	/ɹ/
	Tired	/ɹ/
	Heart	/ɹ/
	Third	/r/
	Hard	/ɹ/
	From	/ɹ/
	First	/ɻ/

Sir Sean Connery's AFI Speech

June 8th 2006

Well, well. Gettin' on a bit. <cough> (audience laugh). I had no idea that this was such a big deal (audience laugh). When Howard, that's Mr Stringer, called me and said that the AFI has chosen you for this award, well I, <ha..ha..> I just had no idea. And then I was given a list of the people who'd received this fantastic honour and I began to get a bit nervous, but not as nervous as I am at this moment (audience laugh). I mean it sincerely. You know, the academy Awards is something else because you can hide. There are winners and losers and other people to blame (audience laugh) but the AFI <ha..> you're on your own (audience laugh), and, well I'm here and I'm very happy you're here too. And I thank you for bringing my family and friends together for tonight. My family, Micheline, my beautiful wife. Some of our children (audience applaud), you, (louder applause) thank you. You are on your own life achievement. I'm more than pleased that you like my work. I have to admit that it looked pretty damn good from where I was sitting, <ha..> (audience laugh and applaud), <ah..>, and it brought back to me lots of terrific memories. Memories of working with people who are fun and industrious. Talented and enthusiastic. These are all the qualities that I find admirable. <snort> the rest of you, well, you know who you are (audience laugh), you know <ha..> (audience continue laughing) <ha..> making movies is either a utopia or its like shovelling shit uphill (wild laughter) and tonight I suppose we put down our shovels and remember the good times (audience laugh) well, I've had many. My start, my childhood, was less than auspicious, but when I was young we didn't know we lacked anything because we had nothing to compare it to, and there's a freedom in that. I had a very hard working mother and father. I think of them both a great deal. I got my break, big break, when I was five years old. And it's taken me more than seventy years to realise it. You see, at five I learnt to read. It's that simple. And it's that profound. I left school at thirteen, I didn't have a formal education,

and I believe I would not be standing here tonight without the books, the plays, the scripts. It's been a long journey from Fountainbridge to this evening, with you all. Though my feet are tired, m, my heart is not. A few months ago I was in London. I was having a great lunch with my very first agent. He's older than me (audience laugh). Suddenly he said to me, 'Sean, life is good. But isn't the third act shit?' (audience laugh). I (audience continue laughing) I suppose he has a point (audience laugh) but not tonight (audience laugh). I thank you all, my family, friends, for one hell of an evening. Good night (audience erupt in applause).