Vowels, which consist of a combination of three juxtaposed sounds, are commonly termed **Triphthongs**. Contrary to diphthongs production, the articulation of triphthongs involves two gliding movements, that is, a smooth shift from the sound A to B and finally to C. By way of example, when we produce the triphthong / **eɪə /,** the vocal organs shift from the vocalic position / **e** / to / **ɪ** / and then smoothly shifts to / **ə** / (Roach, 2009). It worth noting that it is almost difficult for native and non-native speakers to recognize the last vocalic position, Schwa, in words that have a triphthong. Because, it must be noted, / **ə** / is the shortest vowel in the whole English inventory system, many non-linguists cannot hear it in speech, and thus fail to hazard a guess about the exact number of sounds in the words which typically have triphthongs, such as *royal* and *lower*. In essence, there are five triphthongs in the English language:

/ eɪ / + /ə/ = / eɪə /

/ ɔɪ / + /ə/ = / ɔɪə /

/ ɑɪ / + /ə/ = / ɑɪə /

/ əʊ / + /ə/ = / əʊə /

/ ɑʊ / + /ə/ = / ɑʊə /

Remarkably, all the five triphthongs listed above end with the short vowel **/ə/**. Although it is possible to find triphthongs which are composed of one closing diphthong followed by **/ə/**, it is impossible to find a triphthong that is formed by combining a centering diphthong and a Schwa in any English speaking community. This is quite conceivable, provided that in English phonetic system the vowel is not followed by another *identical* vowel, in this case **/ə/ + /ə/ = /ʊəə/***. In brief, the combination of one centering diphthong + Schwa, though theoretically possible, does NOT occur in any English-based variety, be it standard or vernacular.

CHARACTERISATION AND CLASSIFICATION OF VOWELS

Lesson 14: Classifications of Vowels

INSTRUCTIONAL OBJECTIVES

After studying this course, students will be able to:

- Understand the locus of the Cardinal Vowel System (CVs)
- Learn how to describe the vowels in terms of distinct reference points, such as height and frontness

Introduction:

This course overviews the Cardinal Vowel System **(CVs)** used to describe monophthongs, diphthongs and triphthongs in terms of a set of criteria. Some of the **CVs** descriptions discussed in this course, it must be noted, are similar to other descriptions used with other languages.

Cardinal Vowel System:

Figure 12. Daniel Jones

In 1917, the British phonetician **Daniel Jones** (1881–1967) devised the so called **Cardinal Vowel System** (In short, **CVs**) as a reference point for classifying the English vowels. The cardinal vowel system was introduced to describe the vowels with regards to many criteria, ranging from height, openness/closeness, backness/frontness to roundedness. The section that follows addresses each criterion individually and considers the possible differences in descriptions in both varieties, namely the standard British English (RP) and General American English (GA).

Classifications: Monophthongs

Figure 8 displays the cardinal vowel system of the English monophthongs. It was noted in the previous course that monophthongs vary in terms of length and quality. Yet, they also differ in terms of their height, backness and openness. At a closer look, the vowels / **ɪ** / and / **ʊ** / are high vowels, as opposed to the mid vowels /**e**/, /**ʌ**/ and / **ə** / and the low vowels / æ / and / **ɒ** /. Likewise, long vowels vary in terms of their height, as well. Comparatively, notice that the tongue position for the long vowels **/ i: /** and **/ u: /,** for instance, seems to be higher than their short counterparts-/ **ɪ** / and / **ʊ** /. As for frontness, / **ɪ** / and **/ i: /** are front vowels, whilst / **ʊ** / and /u:/ are back vowels. Unlike the central vowels /**ʌ**/, / **ə/** and **/ ɜ: /**, the vowels / **æ** / and /**e**/ are front vowels. As for openness, it appears that all low vowels, such as **/ æ /** and **/ a: /** are open vowels, as opposed to the vowel **/e/** which is considered as a half open vowel. Conversely, all the high vowels are also close vowels, such as / **ɪ** /, **/ i: /** and **/ u: /.**

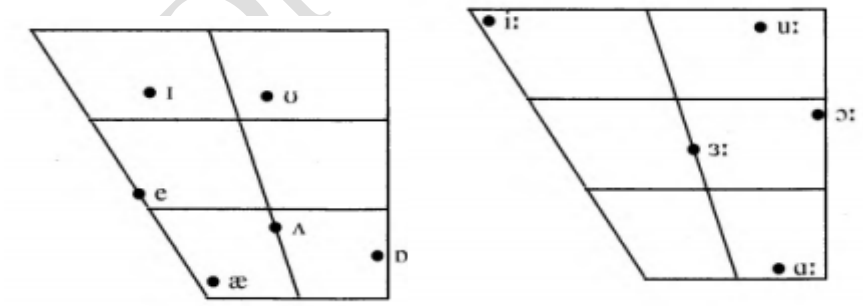

Figure 13. English Short and Long Vowels. From *English Phonetics and Phonology* (p. 13-16), Roach, P. (2009). Cambridge: Cambridge University Press.

The roundedness criterion refers to the shape made by your lips when articulating the vowels. All back vowels, be they short or long, such /**ʊ/** and **/ ɔ**: **/** involve a complete roundedness of the lips (**Rounded**). However,

the shape of your lips tends to be, more or less, **neutral** when pronouncing central vowels and **spread** when pronouncing front vowels (Roach, 2009)

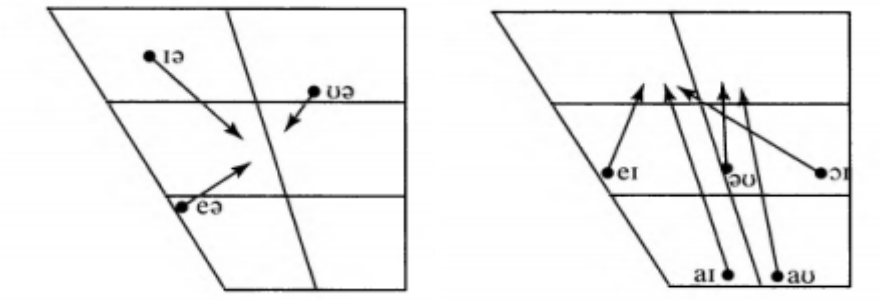

Figure 14. Centering and Closing Diphthongs in English. From *English Phonetics and Phonology* (p. 18), Roach, P. (2009). Cambridge: Cambridge University Press.

Centering diphthongs end with the short vowel / **ə** /. **The CVs** in figure 14 shows that the diphthong **/ ɪə** / begins with the spread, front and close vowel /**ɪ**/ and gradually moves to the neutral, central and mid vowel **/ ə /.** The vowel / **eə** /, conversely, starts with the spread, front and half close vowel /**e**/ and then glides to the neutral, central and mid vowel **/ ə/.** As for closing diphthongs, the ending vowel is either **/ʊ/** or **/ ɪ/.** By way of example, the articulation of the diphthong **/əʊ/** involves a gliding movement from the neutral, central, mid vowel /**ə**/ towards the rounded, back, close vowel / **ʊ** /.