7

PHONOLOGICAL SYSTEM OF THE ENGLISH LANGUAGE. VOWELS, PHONETIC SYMBOLS, STRONG AND WEAK FORMS. DIPHTHONGS, PHONETIC SYMBOLS. COMPARISON WITH THE PHONOLOGICAL SYSTEM OF THE OFFICIAL LANGUAGE OF THE CORRESPONDING COMMUNITY

1. THE PHONOLOGICAL SYSTEM

Phonology is the study of the sound systems of languages, and of the general properties displayed by these systems. By contrast with phonetics, which studies all possible sounds that the human vocal apparatus can make, phonology studies only those contrasts in sound (the phonemes) which make differences of meaning within the language. When we listen carefully to the way people speak English, we will hear hundreds of slight differences in the way individuals pronounce particular sounds. For example, one person may pronounce /s/ in a noticeably slushy manner, while another may pronounce it in a lisping manner. A phonetician would be interested in describing exactly what these differences of articulation are. A phonologist, however, would point out that both articulations are types of /s/, no matter how the /s/ varies, continues to contrast with /b/ and /m/ and other words where there is just one basic unit, or phoneme, involved.

Therefore when we talk about the phonological system of English, we are referring to the number of phonemes which are used in this language, and to how they are organized. To say there are twelve pure vowel sounds in English means that there are twelve units which can differentiate word meanings: short /I/ is different from long /i:/, for example, because there are pairs of words (such as ship and sheep) which can be distinguished solely by replacing one of these vowels by the other. This means that the twelve pure vowels we are going to deal with in this topic owe their existence to this principle.

On the other hand I should highlight the fact that we are used to seeing the written language as a sequence of letters, separated by small segments of space. This is how we were taught to write. We formed our letters one at a time, then slowly and painstakingly brought them together in joined-up writing. We learned to call five of these letters “vowels” (A, E, I, O, U), and the others “consonants”.
We may also have learned that letter **Y** is also sometimes used as a vowel.

Everyone born with the normal capacity to learn acquires the ability to listen and speak long before the ability to read or write. Moreover, when the English alphabet was first devised, its letters were based on a consideration of the nature of the sounds in Old English\(^1\). **The origins of the written language lie in the spoken language, not the other way round.** It is therefore one of life’s ironies that traditionally in present-day education we do not learn about spoken language until well after we have learned the basic properties of the written language. As a result, it is inevitable that we think of speech using the frame of reference which belongs to writing. We even use some of the same terms, and it can come as something of a shock to realize that these terms do not always have the same meaning. Therefore and always bearing in mind that the main aim is to develop the communicative competence our curriculum includes the phonological knowledge under the block of contents “linguistic knowledge”. In fact, one content for the first course in secondary school is “Difficult phonemes. Vowels and oral diphthongs. Vowels and nasal diphthongs. Consonants and consonantic groups. The syllabic division”, and this is definitely a phonological content that is developed in the following courses.

### 2. THE PURE VOWEL SOUNDS\(^2\)

A good example of the speech-writing difference is the way we have to re-think the idea that “there are five vowels” when we begin to discuss speech. There are in fact some 20 or so vowels in most accents of English (the exact number often depending on the way the system is analysed) and their sound qualities can vary enormously from accent to accent. The vowel sounds of American English, for example, are clearly different from those of British or Australian, and the vowels typical of one locality in any of these countries can differ appreciably from those of another. Indeed, vowel differences make up most of the distinctiveness which we associate with a particular accent.

Anyway, we can state that there are 12 pure vowels in Standard English\(^3\), those exemplified by the unique or first vowel sound in the following words:

| Sea, feet, field | i: |
| Big, village, women | I |
| Get, fetch, head | e |

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\(^1\) The irregularities we endure nowadays arose centuries later – THE GREAT VOWEL SHIFT.

\(^2\) We say “pure vowels” in contrast with the diphthongs, which are also considered vowel sounds.

\(^3\) Also known as Queen's (or King's) English and BBC English.
And the weak form called schwa /ə/ pronounced in most of the non-stressed syllables like in the, butter, sofa, about.

All vowels have certain properties in common, which distinguish them from consonants:

• From a phonetic point of view, vowels are articulated with a relatively open configuration of the vocal tract: no part of the mouth is closed, and none of the vocal organs come so close together that we can hear the sound of the air passing between them (what phoneticians call audible friction). The most noticable vowel quality is therefore [a], said with the mouth wide open.

• From a phonological point of view, vowels are units of the sound system which typically occupy the middle of a syllable, as in cat and big.

• Vowels typically involve the vibration of the vocal cords (voicing), and their distinctive resonances are made by varying the shape of the mouth, using the tongue and the lips. In English, there are no vowels whose chief characteristic is the use of nasal resonance (nasal vowels) – unlike, say, French or Portuguese. English vowels are all oral vowels, and take on a nasal quality only when they are being influenced by an adjacent nasal consonant, as in no, long and man.

When describing the 12 pure vowels a particularly important factor is LENGHT (symbolized in the phonetic alphabet by colon [:]). When we listen to the pure 12 vowels, it is evident that five of them are relatively long in duration, and seven are relatively short. Moreover, in several cases length seems to relate pairs of vowels which are articulated in roughly the same part of the mouth. In the following examples, pairs of words are followed by the same consonant. If each word is given the same amount of emphasis, there is no doubt that the vowel in /si:t/ seat is much longer that the in /sIt/ sit; and similar effects can be heard in

Sat, hand, ban  æ
Sun, blood, does ʌ
Calm, father, car ə:
Dog, lock, cough ə
All, saw, cord ɔ:
Put, wolf, good ʊ
Soon, soup, shoe u:
Bird, turn, learn ɔ:
/fuːd/ food vs /gʊd/ good
/dɔːn/ dawn vs /dɒn/ don and
/laːd/ lard vs /læd/ lad

There is also a length difference between long /ɜː:/ and schwa /ə/, though as the former occurs only in stressed syllables in RP (bird, servant), and the latter only in unstressed syllables (above, butter), this is not a contrast which enables a difference of meaning to be expressed.

But the contrast between long and short vowels is not just one of length (quantity); a different place of articulation (quality) is also involved. This is why we have different symbols, for example, for a long /iː/ and a short /ɪ/ apart from the colon added to the long sound. If length were the only factor, both vowels would be represented by the same symbol with the single difference of the colon: /iː/ vs /ɪ/.

According to the RAISING DEGREE OF THE TONGUE when the air goes through the mouth, there is a classification of vowels which places them somewhere between: Close (the height of the tongue is close to the palate, the tongue is raised as much as possible to the roof of the mouth /iː/, /uː/), half-close (the tongue is almost close to the palate /ɪ/, /ʊ/) and half-open (the tongue is raised to the lower part of the mouth /e/, /æ/, /a/, /ɔː/), and open (the tongue goes as low as possible inside the mouth /æ/, /ʌ/, /ɑː/, /ɒ/).

Another feature which characterizes the pronunciation of vowels is the POSITION OF THE TONGUE. There are three basic positions: front (the part of the tongue that is raised the highest is the front /iː/, /ɪ/, /e/, /æ/), central (the centre of the tongue is raised the highest /ʌ/, /ɜː/, /ɔː/), and back (the part of the tongue that is raised highest is the back /ɑː/, /ɒ/, /ɔː/, /ʊ/, /uː/).

The last feature concerns the POSITION OF THE LIPS when the air goes out. We differentiate: spread (the corner of the lips are not forward /iː/), neutral (the corners of the lips are neither rounded or spread /ə/), and rounded (the corners of the lips are brought forward /uː/).

Taking this into account, we can describe each vowel sound according to all those features. For example:

The long vowel /iː/ is a front close vowel as the height of the tongue is close to the palate and the part of the tongue that is raised highest is the front. The lips are in spread position. The vocal cords are in vibration so it is voiced and the soft palate is raised, making the air escape oral. It can have nasalized varieties when occurring between
nasals, for example in "mean". It's a long vowel but it can be reduced before fortis consonants such as $p$, $t$, $k$, $s$, as in "cease" /ˈsiː/.

2.1. STRONG AND WEAK FORMS

The phenomenon of gradation exists in many common words which have two or more pronunciations. So we can talk about strong and weak forms. A strong form occurs mainly in the stressed syllable while some weak forms occur only in the unstressed syllables. A weak form is distinguished because of a difference in quality, in quantity and absence of sound, as it happens in the word “cotton” /ˈkɒtn/.

The English sound schwa /ə/ signals the distinction between strong and weak syllables because weak forms usually become /ə/. In some other cases the vowel of the weak form is /i/ and in some other cases the weak form lacks a vowel. The following examples illustrate words with both weak and strong pronunciation as it is the case of:

<table>
<thead>
<tr>
<th>STRONG pronunciation</th>
<th>WEAK pronunciation</th>
</tr>
</thead>
<tbody>
<tr>
<td>The /diː/</td>
<td>/da/ - /di/</td>
</tr>
<tr>
<td>Are /aː/</td>
<td>/ə/</td>
</tr>
<tr>
<td>But /bat/</td>
<td>/bat/</td>
</tr>
<tr>
<td>And /ænd/</td>
<td>/ənd/</td>
</tr>
<tr>
<td>Been /biːn/</td>
<td>/bin/</td>
</tr>
<tr>
<td>Saint /sɛɪnt/</td>
<td>/sænt/</td>
</tr>
</tbody>
</table>

Sometimes the strong forms may be used in unstressed positions with a shortening of the vowel, as it happens with: “be, been, or, we, you…”

3. THE ENGLISH DIPHTHONGS

A diphthong can be defined as a vowel sound, occupying a single syllable, during the articulation of which the tongue moves continuously from one position to another, as in the pronunciation of “late”. A diphthong does not count as two separate vowels, but constitutes a separate vocal entity (a phoneme). Historically, they arose from the conjunction of long or short vowels with a following /ʊ/; and of /a/ or /o/ with a following /i/. They can be classified as: closing or centring diphthongs.

- In CLOSING DIPHTHONGS there is a glide from one open vowel to a close vowel, so there is movement upwards towards a closer position of the tongue. These diphthongs are /eɪ/ as in “day”; /ai/ as in “die”; /ɔɪ/ as in “boy”; /əʊ/ as in “vow” and /au/ as in “house”.
• In **CENTRING DIPHTHONGS** however, there is a glide from a front or back vowel to the central vowel schwa /a/, so there is a movement inwards towards the centre of the mouth. These diphthongs are /ɪǝ/ as in “beer”; /ɛǝ/ as in “where” and /ʊǝ/ as in “poor”.

So, a diphthong is simply a glide from one pure vowel to another. For instance, “the” contains a vowel sound schwa /a/ and in “though” the sound produced is neither schwa /a/ nor /u/ but an amalgam of the two sounds. So, “the” and “though” can become a minimal pair in a weak position.

As it usually happens with the vowels each diphthong can correspond to a series of spellings, for example:

• The closing diphthong /eɪ/ can be written as <a, ai, ay, ei, ey, ea>
• The closing diphthong /aɪ/ can be written as <i, ie, ye, y, ei, igh>
• The closing diphthong /ɔɪ/ can be written as <oi, oy, uoy>
• The closing diphthong /əʊ/ can be written as <o, oa, oe, ou, ow, eau>
• The closing diphthong /aʊ/ can be written as <ou, ow>
• The centring diphthong /ɪǝ/ can be written as <ear, ea, ei, eo, er, eer, ier, eous, ia>
• The centring diphthong /ɛǝ/ can be written as <air, ear, ayor, ayer, ae, ai, ere>
• The centring diphthong /ʊǝ/ can be written as <oor, our, ure, ur, ua, ue, ewe>

Knowing all that a diphthong could be described as follows: the English diphthong /aɪ/ starts at the sound between vowels /æ/ and /a:/ with the tongue in low position and its front raised, and with the lips spread to neutral and moves to vowel /ɪ/.

There is a similar sequence of vowel sounds called **TRIPHTHONGS**, which can be defined as a combination of three vowel sounds in one syllable. English has **five thriphthongs**. They are all made up of a closing diphthong followed by a schwa. Therefore, they are: /eɪǝ/ (player); /aɪǝ/ (fire); /ɔɪǝ/ (employer); /əʊǝ/ (slower) and /aʊǝ/ (flower).

As a general rule the central element of the triphthongs, that is /ɪ/ or /u/ is reduced quite considerably. So, in /eɪǝ/, for example, the tongue only goes slightly in the direction of /ɪ/ before continuing to /ǝ/. 
4. THE ENGLISH AND THE SPANISH PHONOLOGICAL SYSTEMS

4.1 THE FEATURES OF THE LANGUAGE

Spanish is a syllable-timed language. This means that every syllable is produced by an expulsion of air from the lungs. At the same time muscles may or may not move. When they do, they give more emphasis to that syllable. Syllable-timed languages organise the expulsion of air so that it is regularly spaced and every syllable occupies more or less the same amount of time; the distance between unstressed syllables and stressed ones depend on the number of syllables that intervene.

On the contrary, English is a stress-timed language. This means that the muscle movement are organised according to stressed syllables. The relative stress of words in a sentence depends on their relative importance: the more important a word is, the stronger is its stress. In the absence of special emphasis, the most important words are: nouns, adjectives, main verbs, interrogative pronouns and adverbs. When all the words are equally important, they all have strong stress.

4.2. ENGLISH AND SPANISH VOWELS

There are more vowels in the English phonological system (12 pure vowels) than in the Spanish one (5 pure vowels). There are also more diphthongs in English than in Spanish.

English vowel sounds are “phonemes” that is a minimum unit of distinctive sound-feature and therefore they carry meaning. Students of English Language need to be aware of this (different number of vowel in English) and get as much closely as possible to pronunciation, accuracy which will guarantee no break in communication. This is specially important for what is called "minimal pairs", that is, two or more different meanings depending on the accuracy in pronouncing their different phonemes. For example: sheep-ship, fool-full, cat-cut-cart. So whenever we are teaching English for communication, these minimal pairs should be emphasized.

4.3. DIDACTIC IMPLICATIONS

Differentiating similar sound is quite a difficult issue for second language students of English. So the problem for us, teachers, is how and what we are going to correct. We must correct those mistakes which may cause low intelligibility, and we must set a group of initial steps to correct them: repetition exercises.

A second step to correct possible mistakes is to set activities involving correction by the pupils themselves such as: recording a
speaking activity (this activity ensures self-monitoring), or recording their progresses is a good way of giving them feedback.

But, always, whatever the kind of correction, we must be careful when we correct as a continuous correction of the pupils’ mistakes could result in a loss of motivation, which is essential when teaching such difficult aspects as pronunciation, intonation, stress.

Some of the priority problems when dealing with vowels are:

- /i:/ and /I/ are confused, since Spanish only use the latter.
- /æ/, /ʌ/ and /a:/ are all confused, since Spanish use /ʌ/.
- /ɒ/, /əu / and /ɔ:/ are all confused, since Spanish use /ɒ/.
- /ə/ is replaced by its spelling.
- Spanish has no quantity distinction.
- Spanish pronunciation might resemble dialects due to mistakes.

CONCLUSION

To sum up, phonetics and phonology can help our students to establish effective communication, since a bad pronunciation can derive in bad understanding. This is specially the case of minimal pairs in which a slight difference in pronunciation brings about a change in meaning. So this unit talks about some of these topics that are normally so difficult but so important to deal with in classroom.

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