Airstream Mechanisms

In phonological forms of English, many of them occur regularly in English words. In addition, many of them occur regularly in English words because they are important for a precise description of the sounds of English. These sounds can be categorized into two main types: airstream and phonation.

In this part of the book, we will start considering the total range of human phonation and phonation types. This is difficult to describe, but imagine a speaker who can make all the sounds of the English language. In this way, we can find subtypes of airstreams and phonation types that can help us improve our memory span. These words can be grouped into different categories, such as those shown below.

The next page describes some of the more difficult to describe, but imagine a speaker who can make all the sounds of the English language. In this way, we can find subtypes of airstreams and phonation types that can help us improve our memory span. These words can be grouped into different categories, such as those shown below.
TABLE 6.1: Movement (x-axis) is shown on a graph. The y-axis measures the height of the object. The object moves forward, backward, up, and down along the graph. The height of the object changes as it moves along the graph. The object's position is shown on the graph at different points in time.

**Figure 6.1:** The sequence of events that occurs in a phonological expression. The expression starts with an initial phoneme, followed by a phonemic segment, and then a phonetic segment. The phonetic segment is further divided into a syllable and a phoneme. The phoneme is then divided into a nucleus and a coda.

**Arabesque mechanisms:** When the initial phoneme occurs, there is a slight change in the pitch of the voice. The pitch then remains relatively constant, with a slight rise at certain points. The pitch then returns to its original level, and the voice continues to rise and fall.

**Syllabification:** The sequence of events that occurs in a phonological expression is shown in the diagram. The expression starts with an initial phoneme, followed by a phonemic segment, and then a phonetic segment. The phonetic segment is further divided into a syllable and a phoneme. The phoneme is then divided into a nucleus and a coda.

**Phonetic transcriptions:** The transcriptions shown in the diagram are phonetic transcriptions of the word. The transcriptions include the initial phoneme, followed by the phonemic segment, and then the phonetic segment. The phonetic segment is further divided into a syllable and a phoneme. The phoneme is then divided into a nucleus and a coda.
Chapter 6: Articulatory Phonetics

In this chapter, we will consider the production of speech sounds in English. We will explore the anatomical structures involved in speech production and describe the process by which sounds are produced. We will also discuss the role of the larynx, vocal tract, and articulators in producing speech.

Articulatory sounds often occur in oppositions in English, particularly in contrastive patterns of the vocal tract. For example, in the contrast between /p/ and /b/, the tongue is raised for /p/ and lowered for /b/.

Figure 6.2: Estimated sequence of events in a simple phonetic movement (g)

The sequence of events in a simple phonetic movement is as follows:

1. The lips close tightly.
2. The tongue moves to the position of the sound.
3. The lips open or close.

The lips are a primary articulator, and they are responsible for forming the stop consonants /p/, /b/, /t/, /d/, /k/, and /g/.

In Figure 6.2, we can see the estimated sequence of events for a simple phonetic movement. The lips close tightly (1), the tongue moves to the position of the sound (2), and the lips open or close (3).

The next steps...
ARTICULATION MECHANISMS

When the sound is produced in a single phoneme, the mouth and tongue are in a fixed position. However, when multiple phonemes are produced, the mouth and tongue move continuously, and the articulatory mechanisms continuously adjust. This is because the production of each phoneme involves different muscle movements and the production of the next phoneme begins before the production of the current phoneme is complete.

In the example of the word "cat," the sound of the first phoneme, "c," is produced by the tongue and the palate. The sound of the second phoneme, "a," is produced by the tongue and the lips. The sound of the third phoneme, "t," is produced by the tongue and the teeth.

The articulatory mechanisms in the production of the word "cat" are as follows:

1. The tongue and the palate are raised to produce the sound of the first phoneme, "c.
2. The tongue and the lips are moved to produce the sound of the second phoneme, "a.
3. The tongue and the teeth are moved to produce the sound of the third phoneme, "t."
TABLE 6.3. Consonant phonetics in English. The letters 'and' will be discussed in this chapter.

<table>
<thead>
<tr>
<th>Consonant</th>
<th>Dental</th>
<th>Post-dental</th>
<th>Alveolar</th>
<th>Lateral</th>
</tr>
</thead>
</table>

be discussed later in this chapter. The letters 'and' will be discussed in this chapter.

In Table 6.3, the symbols for the nasal consonants are shown. The nasal consonants are represented by the letters 'n' and 'ng'. The nasal consonants are produced by blocking the flow of air through the nose, either by the tongue or by the lips. The symbols for the nasal consonants are used in words and expressions in English.

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voicing sounds (chicks) may be combined with phonic gestures.

**States of the Glottis**

Phonations can also be oral or nasal.

Buried in the body of a phonation, or the place of a vowel, is the place of the words, which is why

**TABLE 6.4** The principal articulation processes.

<table>
<thead>
<tr>
<th>Process</th>
<th>Description</th>
<th>Examples</th>
<th>Vocal Folds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voicing</td>
<td>The place of the vocal folds is the place of the words, which is why</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Articulation</td>
<td>The place of the words is the place of the phonation, or the place of a vowel, is the place of the words, which is why</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Articulation</td>
<td>The place of the words is the place of the phonation, or the place of a vowel, is the place of the words, which is why</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The Gollins also discuss the effects of the phonation, or the place of a vowel, is the place of the words, which is why


The mucosal sounds is a soft sound produced while breathing. Usually, these sounds are produced in the nose or mouth when the vocal folds are relaxed and the air flows gently through the airways. These sounds are often heard in children and in individuals with certain medical conditions such as asthma or chronic obstructive pulmonary disease (COPD).

**Figure 6.4**

Four types of breathing.

**Table 6.5**

Mucosal sounds in different positions.

<table>
<thead>
<tr>
<th>Position</th>
<th>Mucosal Sounds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lying flat on back</td>
<td>Quiet breathing</td>
</tr>
<tr>
<td>Sitting upright</td>
<td>Normal breathing</td>
</tr>
<tr>
<td>Standing upright</td>
<td>Quiet breathing</td>
</tr>
<tr>
<td>Crouching down</td>
<td>Normal breathing</td>
</tr>
</tbody>
</table>

**Notes:**

1. Mucosal sounds are often heard in children and in individuals with certain medical conditions such as asthma or COPD.
2. The sounds are produced when the vocal folds are relaxed and the air flows gently through the airways.
3. The sounds are often not noticed by the individual producing them but can be detected by a medical professional.

---

A significant portion of the mucosal sounds appear to be produced by the vibrating vocal cords. The sounds are often not noticed by the individual producing them but can be detected by a medical professional.
in some American Indian languages, a vowel onset is not part of the following word. Similarly, in Sanskrit, the onset of a word is not part of the following word.

In some languages, the onset of a word is not considered to be part of the following word.
The choice of symbol depends on the reason for making the transcription. Mean that specific symbol is should be transcribed just as it is graphically. Choose symbol that expresses a shorter vowel, which is followed by a consonant, and 

<table>
<thead>
<tr>
<th>Table 6.6: Stops in Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>voiced</td>
</tr>
<tr>
<td>voiced</td>
</tr>
</tbody>
</table>

Figure 6.7. Shows the relationship of the final central stop in the second row.

Table 6.7: Stops in Time

<table>
<thead>
<tr>
<th>initial</th>
<th>9/2</th>
<th>9/2</th>
<th>9/2</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>/p, t, k/</td>
<td>/p', t', k'/</td>
<td>/p, t, k/</td>
</tr>
<tr>
<td>French</td>
<td>/p, t, k/</td>
<td>/p', t', k'/</td>
<td>/p, t, k/</td>
</tr>
<tr>
<td>Navajo</td>
<td>/p, t, k/</td>
<td>/p', t', k'/</td>
<td>/p, t, k/</td>
</tr>
</tbody>
</table>

Differences in voice onset time in different languages on a scale from

Figure 6.8: Voice Onset Time

The most voiced (right under Navajo) to most aspirated (left under French)
The principal actions of the glottis is summarized in a single table. Figure 6.7 shows the waveforms showing the VOT of the stops in Hindi.
Exercises

Required for production [i] [u] [l] [a] [1] [e] [o] [r] Add lines so that the sequence of events is clear.

B. Complete the diagram below so as to show the sequence of the vocal organs.

C. Measure (to the nearest 10 ms) the VOT in the waveforms of the stops in a.

Producing a voiced alveolar implosive:

A. Label the diagram below so as to show the sequence of events involved in (phonetic versions of all the exercises are available on the CD).

Table 6.9  The principal actions of the glottis.