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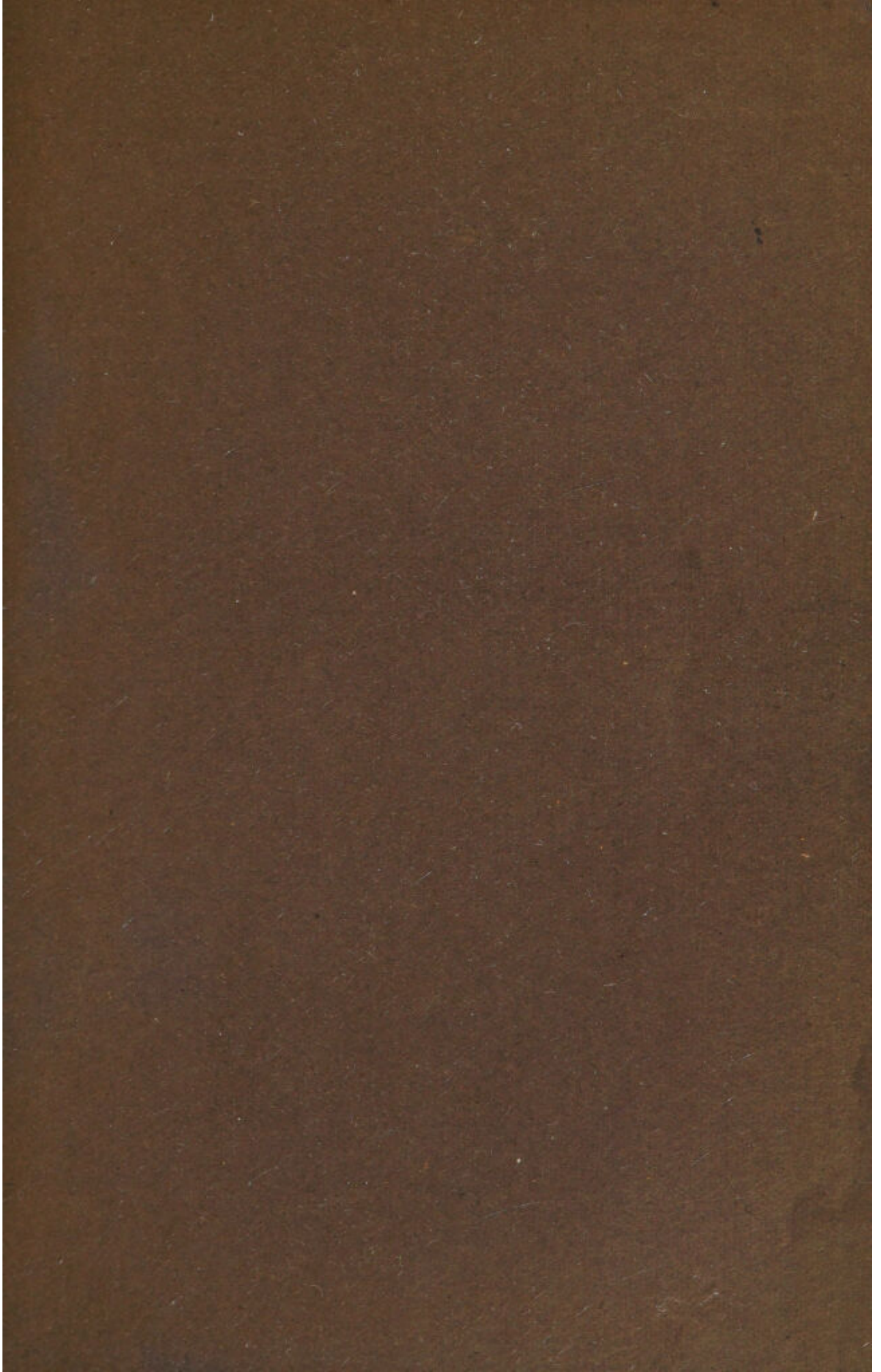


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VOICE TRAINING IN SPEECH AND SONG

AN ACCOUNT OF THE
STRUCTURE AND USE OF THE VOCAL ORGANS, AND THE
MEANS OF SECURING DISTINCT ARTICULATION

BY

H. H. HULBERT, M.A. OXON., M.R.C.S., L.R.C.P.

LECTURER ON VOICE PRODUCTION TO THE LONDON COUNTY COUNCIL, LONDON UNI-
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PREFACE.

AN endeavour is herein made to place voice-training upon a safe scientific foundation; hitherto its principles have been very imperfectly understood, and it has usually been included in the teaching of singing or elocution under the name of voice-production.

The training of the voice is the tuning of the vocal organ, and the removal of defects, whereby the instrument is enabled to do its work efficiently and easily. It would be better to call it voice-building or voice-renovating—the process of renovation being a special form of physical education, accomplished by a scheme of exercises for developing and directing the movements of each part of the vocal apparatus. For success it is necessary that each exercise should be properly executed and its purpose thoroughly understood. This involves a theoretical knowledge, not necessarily of an exhaustive nature, but sufficient to ensure intelligent practice. The theoretical work which has been included in this book always has a definite practical utility: it is strictly confined to the management of the voice, and may be called the practical theory of vocal culture. When the voice has been cultivated and developed by physical education of its special set of muscles it may be, as it were, played upon by the artiste—the singer or speaker. Voice-production, as its name implies,

is the producing or making of the voice, the art of singing or elocution is the playing upon it; they are all three closely related, but each is distinct from the other.

The human vocal instrument is a delicate mechanism and will not admit of anything approaching strain. In the development of its muscles tension and rigidity must be avoided; flexibility must be the aim, not strength. This is also the case in the healthy development of any muscle; in fact the object of voice-training is the acquisition of the perfectly healthy action of that part of the body which is engaged in voice. What is good for the health of a part of the body is good for the body as a whole; each part is dependent for its well-being upon every other part. Hence the voice becomes a valuable and delicate index of what is perfect and what is imperfect in physical education; for even ordinary physical movements badly executed very soon exert an evil influence upon the voice, making it hard and unmusical.

The strictly orthodox procedure in voice-making should include:—

(1) *The development of a flexible body as a whole* by means of a form of physical education absolutely devoid of any movements of a stiffening character—a form of physical education that engenders (a) Grace of movement such as is evident in the very best forms of dancing, so well styled “the poetry of motion”; (b) Lightness and sprightliness of action, avoiding the jerk of discipline or the clumsiness of muscularity; and (c) General flexibility of all the muscles. There must be an absence of stiffness or tension in the fundamental positions or in any positions derived from them. The movements must be efficient and purposeful, but light and graceful.

(2) *The development of a flexible chest* by means of breathing exercises, which will also include a flexibility of the abdominal muscles. This can only be effected by exercises of the proper breathing muscles. Development of the chest by its external muscles is likely to cause stiffness and rigidity of the chest walls.

(3) *The development of the muscles of the articulatory organs*, comprising the muscles of the lips, the jaw, the cheek, the tongue, the soft palate, and the pharynx, so that they may become flexible and easily governed by the will.

In a concise practical treatise on voice it is impossible to do full justice to each of the above sections: the voice itself as vocal sound has to be kept always in the foreground. It will be found therefore that in this book much more has been written about Section 3 than about Sections 1 and 2. The first two sections will be treated separately at a later date.

The treatise is intended for voice-users generally, singers, clergymen, barristers, actors, public speakers, and lecturers, but more especially for teachers, who are probably the greatest voice-users, and therefore most in need of voice-training. The reason why such a large percentage of teachers lose their voices is that, as they have so much voice work to do, any improper use of their vocal organ sooner or later damages its more delicate parts. Both the cure and the prevention in almost all cases is to be found in the scientific physical education of the vocal organ. Prevention is always certain, and so is better than cure.

The treatise includes all the voice-training that is mentioned in the regulations of the Board of Education for the Teacher's Certificate Examination. It is absolutely

necessary that all who have to use their voices much in their work should have definite instruction in voice-training, and the necessity of it for teachers is being gradually realised by the educational authorities; the author sincerely hopes that all who are interested in voice-users will be able to find contained herein the information they require for their guidance; so many of those in authority know that voice-production is necessary for teachers and yet scarcely understand what voice-production means. Teachers are often appointed to teach voice-production who themselves do not know what voice-production is, and in consequence voice-training is frequently branded as useless; whereas if properly taught it is potent and sure. It does not follow, for reasons already given, that a teacher of singing or elocution can also teach voice-production. For the average teacher a training in voice-production is no good unless it is based upon the scientific principles already explained.

The author hopes that his readers will note how carefully each exercise has to be performed in order that good results may be attained, and will understand that the physical education needed for the voice is of a very refined and delicate nature. No one realises more fully than the author how difficult it is to describe in writing exactly how an exercise should be done and how necessary it is that all voice-users should attend a class where practical instruction is given; yet he hopes that those who cannot possibly get the practical help will benefit by the study of these exercises and their purpose. Besides exercises for the control of the breath and of the articulatory movements, special exercises are given for every sound in the English language, and each sound is suitably described for the acquisition of distinct articulation. Connected speech

is included in the art of speaking and reading ; this again requires practical help from a good teacher.

The combined efforts of scientists have done much in the past to elucidate the hidden mysteries connected with voice, and as new paths of investigation are opened out there is a rapid exit of fads, secrets, and tricks of the charlatan. Anatomists, physiologists, hygienists, throat specialists, voice-producers, phoneticians, physicists, and even pathologists and chemists have special lines of original research still waiting investigation in connection with the voice. The author sincerely hopes that this original treatment of voice-training may still further stimulate original research.

The author's thanks are due to Miss Elsie Fogerty for help in the correcting of the proofs and for valuable suggestions.

For further information on phonetics the reader is referred to *The Science of Speech*, by Mr. Benjamin Dumville, M.A., F.C.P., which will shortly be published by the University Tutorial Press.

H. H. H.

1A, WEYMOUTH STREET,
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CONTENTS.

CHAPTER I. Speech.	PAGES
1. Introduction. 2. Analysis of Speech. 3. Phrasing for Speech. 4. Distinctness, Audibility, and Sense. 5. Faults in Speaking. 6. Indistinct Speech. 7. Ponderous Speech. 8. Monotonous Speech. 9. The Closed Mouth	1—5
CHAPTER II. The Vibratory Apparatus.	
10. Definition of Voice. 11. The Larynx. 12. The Cricoid. 13. The Arytenoids. 14. The Thyroid. 15. The Vocal Cords. 16. The False Cords. 17. The Glottis. 18. Pitch. 19. Change in the Cords . . .	6—15
CHAPTER III. The Breathing Apparatus.	
20. Breathing. 21. Breathing of Repose. 22. Breathing of Action and Voice. 23. The Lungs. 24. The Lungs are hollow and elastic. 25. The Chest. 26. The Breathing Muscles. 27. The Floor of the Chest. 28. The Actions of the Diaphragm. 29. Breathing of Physical Education	16—23
CHAPTER IV. The Control of the Breath.	
30. Breathing for Voice. 31. Breathing Exercises. 32. Compression of Air. 33. The Resistance. 34. Sustaining the Breath. 35. Prevention of Breathy Sounds	24—27
CHAPTER V. The Articulatory Apparatus.	
36. Articulation and Pronunciation. 37. Resonating Chamber. 38. The Mouth. 39. The Tongue. 40. Movements of Mouth. 41. The Nose. 42. Resonating Cavities. 43. The Pharynx. 44. Exercises for the Lips. 45. Exercises for the Tongue. 46. Exercises for the Lower Jaw. 47. Exercises for the Soft Palate . . .	28—37

CHAPTER VI. **Distinct Articulation.**

PAGES

48. Tone in Speech. 49. Its Tonic Effect. 50. Song and Speech. 51. Musical Quality. 52. Pitch. 53. Duration. 54. The Classification of Sounds . . . 38—40

CHAPTER VII. **The Vowel Sounds.**

55. Classification of the Vowels. 56. Phonetic Signs. 57. Narrowing of Vowel Sounds. 58. Shaping for Vowel Sounds. 59. Table of Vowel Sounds. 60. *OO*, *Wh* and *W*. 61. *Oh* and *ũ*. 62. *Aw* and *õ*. 63. *Ah* and *ă*. 64. *Ay* and *ě*. 65. *EE* and *ĩ*. 66. *ũ*. 67. *Ou*. 68. *I*. 69. *Oi*. 70. Exercises for the Vowel Sounds . 41—56

CHAPTER VIII. **The Consonants.**

71. Table of Consonant Sounds. 72. Classification of the Consonants. 73. Practice in Articulation. 74. Articulatory Exercises. 75. The “*M*” Sound. 76. *P* and *B*. 77. The “*N*” Sound. 78. *T* and *D*. 79. The “*NG*” Sound. 80. *K* and *G*. 81. *R*. 82. *L*. 83. *H*. 84. *F* and *V*. 85. *Th*. 86. *S* and *Z*. 87. *SH* and *ZH*, *CH* and *J*. 88. The Lisp. 89. Lisp Exercises. 90. Final Consonants. 91. The “Wedge” Exercise 57--70

CHAPTER IX. **The Art of Speaking and Reading.**

92. Kinds of Voice. 93. Audibility. 94. Phrasing. 95. The Meaning. 96. Modification of Sounds. 97. Assimilation and Simplification. 98. Accent. 99. Emphasis. 100. Pitch. 101. Intensity. 102. The Pace of Utterance. 103. Pause. 104. Inflection. 105. Rhythm. 106. Modulation. 107. Hints to Lecturers. 108. Classified Lists of Vowel and Consonant Sounds 71—83

CHAPTER I.

SPEECH.

1. Introduction.—Man thinks, writes, and speaks in words, and in each case they have a dominant significance ; for words correspond to ideas in thought, to letters in writing, and to sounds in speech.

A written or spoken sentence may be described as a thought expressed in words.

The written thought, although it is clothed in beautiful language by the author, merely consists of lifeless words: the spoken thought is endued with life by the speaker, whose aim it is to make each sound stand out clearly and to give the words just that appropriate tone that brings out the correct sentiment. This is what is meant by reading with expression, for the expressive reader is able to convey to his audience the full meaning of the subject-matter ; this depends upon his ability to grasp the exact sentiments of the author, upon the clearness of his utterance, and upon the facility with which he can express these sentiments by suitable modulation of the voice.

This short treatise deals only with the mechanism of speech. By the control of the vocal organs, a habit of clear utterance and of perfect intonation can be acquired whereby the speaker will have little or no difficulty in obtaining the power of expressing what he feels.

2. Analysis of Speech.—Speech may be said to consist of emissions of breath modified as follows: (1) The breath is made to vibrate as it passes through the glottis (the chink between the vocal cords), thus producing sound; (2) it is moulded into vowels as it passes through a definite shaped mouth; (3) it is articulated into consonants by contact with the various parts of the air passages. These vowels and consonants which represent letters in writing must be regarded as sounds or *phones* in speech. Phones are combined to form syllables, syllables are made into words, and words are built up into sentences or phrases. A syllable may consist of one vowel, or of a vowel and one or more consonants; words may consist of one or more syllables; and phrases may contain one or many words. To every phone must be given its exact value; very few speakers are able to do this until they have had proper instruction in the art of speech.

3. Phrasing for Speech.—A *phrase* may be described as a more or less prolonged emission of vibrating breath formed into the sounds contained in the words of the sentence. These sounds should be made to flow out upon each breath and should not be popped out like corks from bottles. Continuous speech is divided up into phrases, to allow intervals for inspiration and to allow pauses that will help to give meaning to the sentences or give emphasis to certain words. These pauses are called rhetorical pauses (as opposed to those indicated by the ordinary punctuation used by printers, which are called grammatical pauses, since they are based upon the grammatical construction of the sentences). In phrasing sufficient time must be allowed for an easy and noiseless intake of air to replace that emitted as voice; also ample time must be given to

the clear, audible, and distinct utterance of every sound and for the modulation of these sounds in accordance with the sense or sentiment of the matter. The effect produced depends as much upon voice and manner as it does upon matter.

4. Distinctness, Audibility, and Sense.—Distinctness and audibility of phones can best be produced by the occasional practice of syllabic utterance, that is by sounding each syllable by itself; in this way difficulties in articulation will be more readily noticed and removed. This syllabic utterance, however, must not be overdone, as it is likely to encourage a jerky delivery.

The correct expression of sense or sentiment depends greatly upon an intelligent phrasing of the matter; it is brought out more easily by sustaining the voice right to the very end of the phrase. The sustaining of the voice is carried out entirely upon the vowel sounds in singing and mostly upon the vowel sounds in speaking. Tone is produced by dwelling upon the vowel sounds; the unvoiced consonants stop the tone and produce *plosive* or *fricative* sounds which being unmusical are not in harmony with tone. It is comparatively easy to invest good tone with the sentiment required.

Care should be taken to dwell upon and properly pronounce the vowels, to hit off smartly the non-vocal consonants, and to get as much voice as possible from the vocal consonants.

5. Faults in Speaking.—As a rule the following sounds are very poorly brought out in speech, the voiced parts of *M*, *N* and *NG*, of *L* and the soft untrilled *R*, of *D*, *TH*, *W*, *G* and *V*. The vowel sounds are too often

narrowed, especially in the London district. Defective articulation is often present in the sounds of *R* (trilled), *S* and *SH*.

6. Indistinct Speech.—Many speakers fail to make themselves heard distinctly and easily because they allow their voices to fall off at the end of each phrase, in which case the last sound or even the last two or three sounds have to be guessed by the hearers.

Words are often mispronounced or run one into another, and the small words and the unaccented syllables of a word are too often imperfectly sounded. It will be easily noticed that in such cases the speakers make too little use of their articulatory apparatus. It is quite possible to follow some speakers if great attention is paid, but many words and sounds have to be guessed. A really good speaker will make each sound so clear, that it can with ease be recognised apart from the context, and this applies to the unaccented syllables as well as to the accented.

7. Ponderous Speech.—The drawl, so noticeable in clergymen, is due to a somewhat ponderous sustaining of the voice upon vowel-sounds, which are not too well moulded, and to a slurring of the consonants. Teachers are often guilty of the opposite fault, for in their endeavour to be distinct they so laboriously articulate their consonants, that the unvoiced sounds predominate and give an unmusical quality to their speech.

Both these faults produce that irritability of throat which is known by the name of "Clergyman's sore throat," but should be styled "Voice-user's throat."

8. Monotonous Speech.—Another very objectionable fault in speaking is to let a regular cadence fall upon the end of each phrase, and to emphasize this by a restless swaying of the body in perfect time with the monotonous inflection of the voice.

9. The Closed Mouth.—The English language contains so many consonant sounds formed with a closed or partially closed mouth, that speaking with the mouth too little open may be said to be an almost universal fault.

In order to acquire an intelligent idea of the mechanism of voice-production it is necessary to give a general description of the organs of speech.

CHAPTER II.

THE VIBRATORY APPARATUS.

10. Definition of Voice.—Voice primarily consists of sounds produced by the vibration of the vocal cords. The vocal cords are two elastic bands stretching from the front to the back of the throat in the middle of a prominence (called Adam's apple) situated in the neck about half way between the jaw and the top of the breastbone. The breath leaving the lungs in expiration passes through the narrow chink left between the two vocal cords when they are brought close together for voice; while passing through this small space the breath makes the cords vibrate, the vibration of the cords is communicated to the breath itself, which now becomes a vibrating column of air from the bottom of the chest to the end of the air passages. *This vibrating column of air is what is called voice.*

The organs employed in the process comprise the *Vocal Organs* proper—the vibrating element, the *Breathing Organs*—the motive element, and the *Resonating Cavities*—the modifying element. The structure and use of these organs will be described in the order here mentioned.

11. The Larynx.—The larynx or voice-box, as it is sometimes called, is composed of cartilages which are joined together by fibrous bands and membranes so as to

protect the vocal cords inside (Fig. 5). It is situated at the top of the wind-pipe, with which it is actually con-

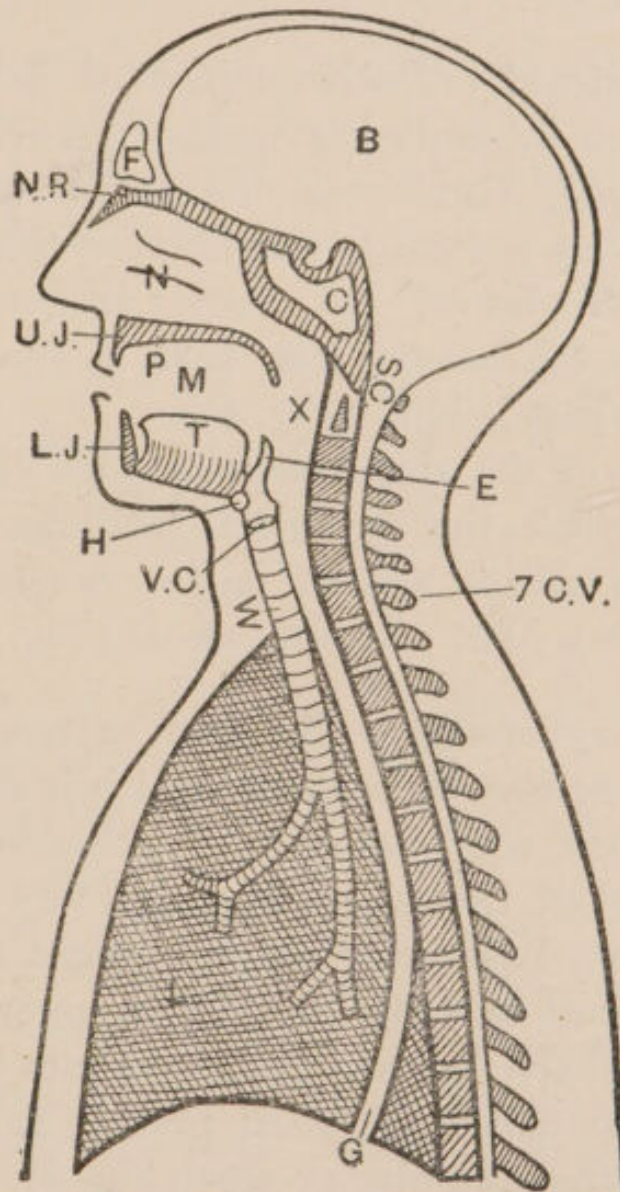


Fig. 1.—THE VOCAL APPARATUS.

Consisting of—L, Lungs; W, Windpipe; VC, Vocal Cords, the opening into X, Pharynx, guarded by E, Epiglottis; Pharynx opens into M, Mouth, and N, Nose, which are separated by P, Palate; NR, Bone forming roof of Nose; F, Cavity in front of Head; C, Cavity between Nose and Brain; UJ, Upper Jaw; L.J., Lower Jaw; T, Tongue; H, Hyoid or Tongue bone; B, Brain; SC, Spinal Cord; 7CV, Seventh Cervical Vertebra.

tinuous, and above it opens into the throat (Fig. 1). The upper opening is protected by a cartilaginous lid called the epiglottis, which when it is raised and open allows the voice

to pass out into the throat, and when it is lowered and shut prevents the food from going into the larynx during swallowing.

12. The Cricoid.—The lower piece of cartilage, shaped like a ring and consequently named the cricoid or ring-shaped cartilage, forms the foundation of the larynx (Fig. 3). It has a fancied resemblance to a signet ring; it is horizontal below, but above it gradually slopes upwards from the narrow ring part in front to the expanded signet part behind (Fig. 4).

On the top of the signet part on each side is a little hollow into which the arytenoid cartilages fit. Lower down on each side is another hollow where the thyroid cartilage forms a joint with the cricoid (Fig. 4).

13. The Arytenoids.—The two arytenoid cartilages (so called because of their shape, which is supposed to be that of a pitcher) are jointed on to each side of the top of the signet part of the cricoid in such a way that they can be rotated around an axis passing straight through them from top to bottom (Fig. 9). Their lower surfaces are triangular in shape and are prolonged into two processes, a front process called the vocal process and an external process called the muscular process (Fig. 8). To the vocal process are attached the posterior ends of the vocal cords, and to the external process are attached the muscles that make the arytenoids rotate on the cricoid, and so regulate the distance between the two vocal cords (Figs. 8 and 9).

14. The Thyroid.—The thyroid cartilage protects the vocal cords. It consists of two wings, which meet together in front forming a definite angle surmounted by a notch (Fig. 2); this can be easily felt in the middle of the neck,

forming Adam's apple. The two vocal cords are attached at their front ends into this angle. Just above the cords the epiglottis is attached (Fig. 3). The wings of the thyroid are widely separated behind and are prolonged into two horns, one of which passes upwards to join the hyoid (the tongue bone), and the other passes downwards to join the cricoid (Fig. 3).

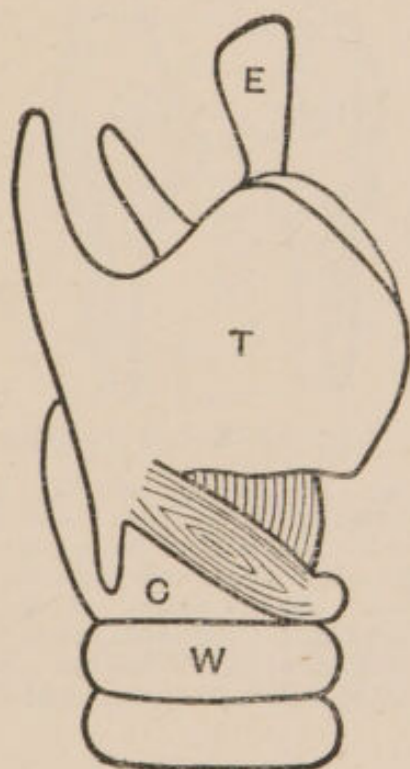


Fig. 2.—THE LARYNX.

Situated at the top of W, the Windpipe, upper opening guarded by E, Epiglottis; T, Thyroid Cartilage; C, Cricoid Cartilage. The muscle passing from the Cricoid to the Thyroid is called the Crico-Thyroid muscle.

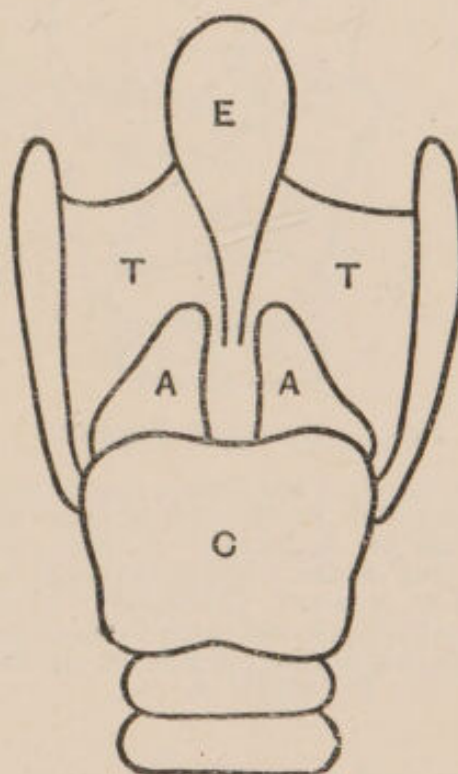


Fig. 3.—BACK VIEW OF LARYNX.

Showing the signet-ring C, Cricoid Cartilage, surmounted by A, the two Arytenoid Cartilages; T, Thyroid Cartilage, open at the back; E, Epiglottis.

15. The Vocal Cords.—The vocal cords consist of muscle and yellow elastic tissue covered with mucous membrane; they can be stretched or relaxed by altering the position of the cartilages to which they are attached. They are triangular in shape, with their bases attached to the thyroid and their edges free (Fig. 5). They stretch from the

angle of the thyroid to the vocal process of the arytenoid (Fig. 4); they are half an inch in length in the female and three-quarters of an inch in the male.

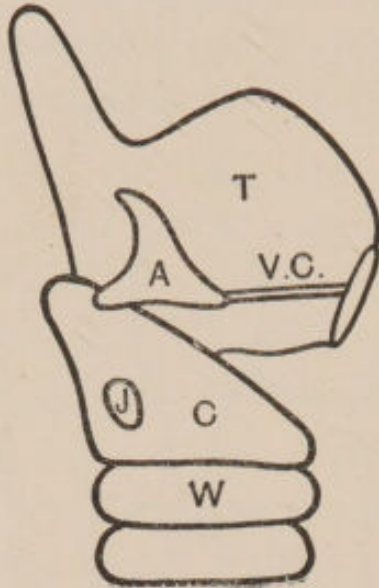


Fig. 4.—INSIDE OF LARYNX.

Showing VC, Vocal Cords, passing from angle of T, Thyroid, to front process of A, Arytenoid. The right wing of the Thyroid Cartilage has been removed. C, Cricoid Cartilage, narrow in front, wide behind, with J, depression for joint with Thyroid; W, Windpipe.

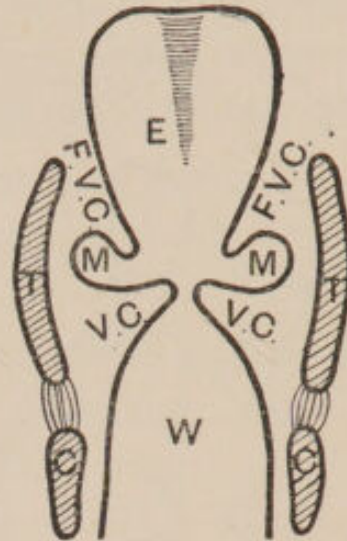


Fig. 5.—SECTION OF LARYNX.

Showing relationship of VC, Vocal Cords, and FVC, False Vocal Cords, to M, Ventricle of Morgagni; also the shape of the vocal tube through which the air passes. T, Thyroid Cartilage; C, Cricoid Cartilage; E, Epiglottis; W, Windpipe. Notice triangular shape of the Vocal Cords.

16. The False Cords.—The false vocal cords are two folds of mucous membrane, one on each side of the larynx just above the vocal cords (Fig. 5); they contain many glands which secrete a fluid to moisten the vocal cords, and they are separated from the vocal cords by a space (ventricle of Morgagni) which allows room for the vibration of the cords (Fig. 5).

17. The Glottis.—The glottis is the space or chink between the vocal cords, which varies in shape and size (Figs. 6 and 7). In the breathing of repose the shape is that of an ellipse. In the fuller breathing of action or

voice it becomes wide and consequently more triangular (Fig. 6). In phonation it is almost closed by the approximation of the cords (Fig. 7). Small muscles inside the larynx attached to the arytenoids cause the glottis to change in shape; they by contraction rotate the arytenoids upon the cricoid (Fig. 9). The lateral crico-arytenoids rotate the arytenoids inwards and approximate the cords,

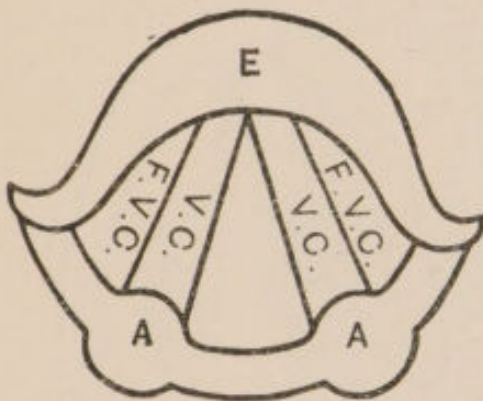


Fig. 6.—THE GLOTTIS.

Open as in the breathing for action.

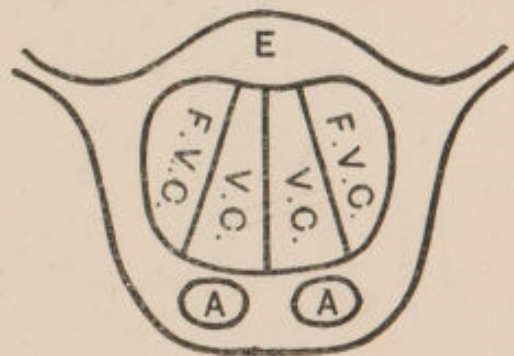


Fig. 7.—THE GLOTTIS.

Almost closed as in phonation. VC, Vocal Cords; FVC, False Vocal Cords; E, Epiglottis; A, Top of the Arytenoids.

In each diagram the space between the Vocal Cords is the Glottis, and the space between the Vocal Cords and the False Vocal Cords is the opening into the Ventricle of Morgagni.

the posterior crico-arytenoids rotate the arytenoids outwards and separate the cords (Fig. 9). The arytenoid muscle draws the two arytenoids together (Fig. 8).

18. Pitch.—The crico-thyroid muscles stretch the vocal cords and raise the pitch of the note by raising the front of the cricoid towards the thyroid, and consequently depressing the back of the cricoid with the arytenoids (Fig. 2). Thus the distance between the back of the angle of the thyroid and the vocal processes of the arytenoids is increased and the cords are stretched.

The thyro-arytenoid muscles attached to the thyroid in front and to the arytenoids behind, lying alongside each

vocal cord and actually sending fibres right into the cords to be attached to the elastic fibres, may be called the vocal muscles, for if they are paralysed loss of voice ensues (Fig. 8). Their action is somewhat complicated, but in all probability they are the muscles which enable the voice-user to make use of the fine and delicate gradations of tone.

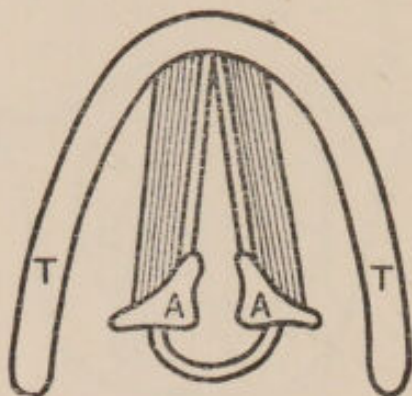


Fig. 8.—THE ARYTENOID CARTILAGES, A, showing the Vocal Cords attached to their front processes. The Thyro-Arytenoid Muscle lies alongside each cord and passes from the Thyroid Cartilage, T, to the Arytenoid Cartilages. The two curved lines at the back of the Arytenoids represent the Arytenoid Muscle, which draws the Arytenoids together.

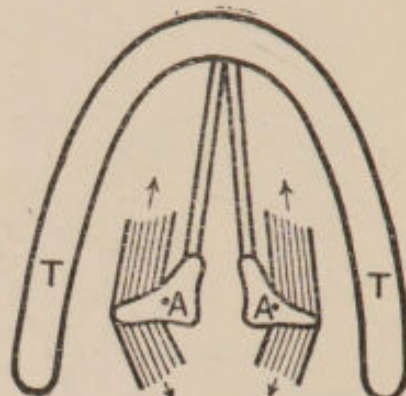


Fig. 9.—THE ARYTENOID CARTILAGES, A, with a dot representing the pivot around which each is moved by its own muscles. The front muscle, called the Lateral Crico-Arytenoid, is attached to the front of the outer process of the Arytenoid; it pulls it forward as shown by the arrow; this action approximates the Vocal Cords. The back muscle, called the Posterior Crico-Arytenoid, is attached to the back of the outer process of the Arytenoid; it pulls it backwards as shown by the arrow and separates the Vocal Cords.

The movements which give rise to voice do not in reality consist of simple movements performed by a single muscle, but rather of combined and coordinated movements of more than one muscle. The mechanism is therefore too complicated for analysis, and it is this complication that gives the singer such a variety of pitch.

19. Changes in the Cords.—Many and contradictory theories have from time to time been advanced as to what

are the exact changes that take place in the cords in the production of tone, and in the ascent or descent of the scale. A knowledge of these theories cannot be of any real utility to the student of speech, as the change is brought about by the complicated action of involuntary muscles

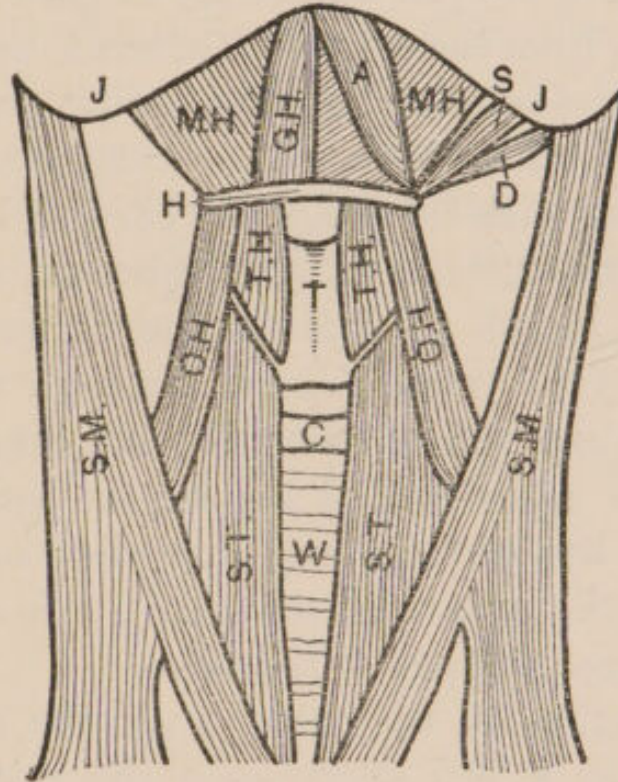


Fig. 10.—THE MUSCLES IN FRONT OF THE NECK ATTACHED TO THE LARYNX, THE HYOID BONE, H, OR THE LOWER JAW, J.

SM, Sterno-Mastoid; OH, Omo-Hyoid; ST, Sterno-Thyroid (Sternum to Thyroid); TH, Thyro-Hyoid (Thyroid to Hyoid); MH, Mylo-Hyoid (Hyoid to Lower Jaw); GH, Genio-Hyoid (Hyoid to Lower Jaw); A, Digastric (front part) (Hyoid to Lower Jaw); D, Digastric (back part); S, Stylo-Hyoid; T, Thyroid Cartilage; C, Cricoid Cartilage; W, Windpipe.

(the laryngeal muscles already mentioned), over which there is no direct control; these muscles will, however, work well if they are not interfered with and misplaced by the action of other muscles. What seems to hamper their movements most of all is any rigidity or tightening of the muscles connected with the outside of the larynx, with the hyoid bone, or with the lower jawbone (Fig. 10). To

ensure freedom of movement of the cords it is necessary to avoid any stretching or contraction of the muscles in the front of the neck; the head should be slightly tilted downwards and the chin kept down and in; this position of the chin will prevent to a large extent rigidity of the muscles of the lower jaw and of the tongue. The larynx, being released from the grip of its external muscles, will be acted upon by its internal muscles, which are involuntary and cooperate with the vocal cord muscles. These internal laryngeal muscles (Figs. 16, 17, and 18) will carry the larynx backwards as it goes upwards, and thus the shortening in length as well as the diminution in the calibre of the vocal tube, which is necessary for the higher notes of the voice, can be effected with ease and without rigidity. The movement of the larynx backwards as it ascends keeps its opening away from the tongue, which, if it is drawn back, presses upon the epiglottis and interferes with the outward passage of the voice.

A concentration of the mind upon the action of the vocal cords has a bad effect upon the voice, for it encourages the bringing to bear upon the delicate elastic bands of an effort that is altogether too great, with a result that the cords are pressed together so tightly for voice that they have to be burst asunder by the outgoing air. This energy should be applied to both ends of the vocal apparatus, leaving the middle part free to do its particular work by its own involuntary muscles. It may be definitely stated that *the voice production is faulty if the voice-user is conscious of the throat and larynx while vocalising*, that is, the speaker or singer must feel the vocal effort at the two ends and not in the centre of his vocal apparatus.

Voice production may be said to consist of the manage-

ment or control of the muscles that preside over the movements of the two ends of the vocal organs; these muscles can, by practice, be made subject to the dictates of the will. The actions of the voluntary vocal muscles so modify the actions of the involuntary, that if the voluntary muscles are well controlled, the involuntary act rightly; but if the voluntary are uncontrolled, the involuntary are thrown out of gear.

This being the case, it will be advisable to pay greater attention to the two ends (breathing and articulation) than to the middle (the movement of the vocal cords).

CHAPTER III.

THE BREATHING APPARATUS.

20. Breathing.—The voluntary muscles engaged in breathing, that require special attention, are those that move the chest walls in inspiration and those that control the air in expiration. The function of respiration consists of an inspiration—a taking-in of air—followed by an expiration—an emission of air. The air enters the lungs whenever any diameter of the chest is increased in size, and air is emitted when the chest returns to its original size. This function may be performed in many ways.

21. Breathing of Repose.—In ordinary quiet breathing the diameter of the chest from the top to the bottom is increased in size by the descent of the contracting diaphragm, and the requisite quantity of air for physiological needs is taken in, to be expelled again by the ascent of the relaxing diaphragm: this purely involuntary action is repeated about 17 to 20 times a minute by the healthy adult.

22. Breathing of Action and Voice.—In the fuller breathing required for action the chest is increased in size from side to side and from before backwards by the movement of the ribs upwards and outwards and by a movement of the breast-bone forwards (this is also accompanied by a modified downward descent of the

diaphragm). In breathing for voice the outward movement of the ribs is still more marked in inspiration. The expiration of repose and action is effected by the elastic recoil of the displaced organs and of the expanded chest walls and lungs; the expiration of voice has to be carefully controlled by voluntary muscles.

23. The Lungs.—The easiest way to get a good conception of the structure and function of the lungs is to purchase a sheep's pluck. Wash it thoroughly in water, and cut away the heart and all the fat and membrane and vessels attached to it so as to expose the windpipe and its branches into each lung. Examine the windpipe and note the arrangement of the rings of cartilage ending above in the enlarged cricoid cartilage with the other laryngeal cartilages attached to it (Fig. 11), also examine the vocal cords inside the larynx. The windpipe divides into two branches, one for each lung, and these branches divide and subdivide like the branches of a tree or shrub until every part of the lung is reached by a branch (Fig. 11). If a tree were hollow throughout and placed upside down it would resemble somewhat the arrangement of air-tubes and cells in the lung. The hollow trunk corresponds to the windpipe, the hollow branches dividing and subdividing into smaller branches represent the bronchial tubes, the hollow twigs represent the smallest or capillary bronchial tubes, and the hollow leaves represent the air-cells (of which there are said to be 600,000,000 in the lungs).

24. The Lungs are hollow and elastic.—If the sheep's lungs are uninjured and fresh they can be distended by fixing a glass tube into the upper part of the windpipe, and by blowing air into it by means of a bellows or by the mouth. This proves that the lungs are hollow,

otherwise the air would not enter them, and that they are elastic, otherwise they would not stretch, and inasmuch as the lungs keep their shape when distended it proves that the air can reach every part of them. As soon as

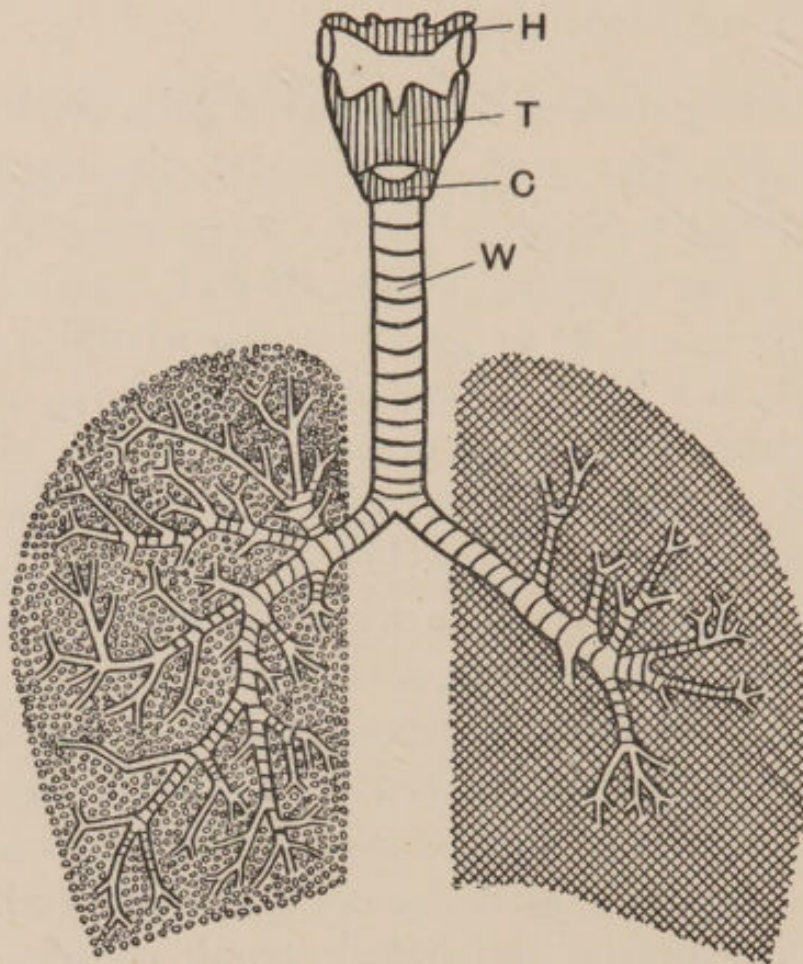


Fig. 11.—THE LUNGS.

Showing the hollow Air Cells, the hollow Bronchial Tubes, the hollow Windpipe W ; C, Cricoid Cartilage ; T, Thyroid Cartilage ; H, Hyoid Bone. N.B.—The channel of communication between the Air Cells and the Larynx.

the stretching is completed and the force removed, the lungs collapse and the air is pushed out by the elastic recoil. Forcing the air into the lungs and stretching the elastic tissue represents inspiration, and the elastic recoil of the lungs themselves, causing the ejection of the air, represents expiration.

25. The Chest.—The chest or thorax is a large cavity enclosing the heart and the lungs (Fig. 13); its walls are composed partly of bone and partly of muscle. The bones are arranged in a cage-like form; the breastbone or *sternum* in front, the ribs at the sides, and the spine

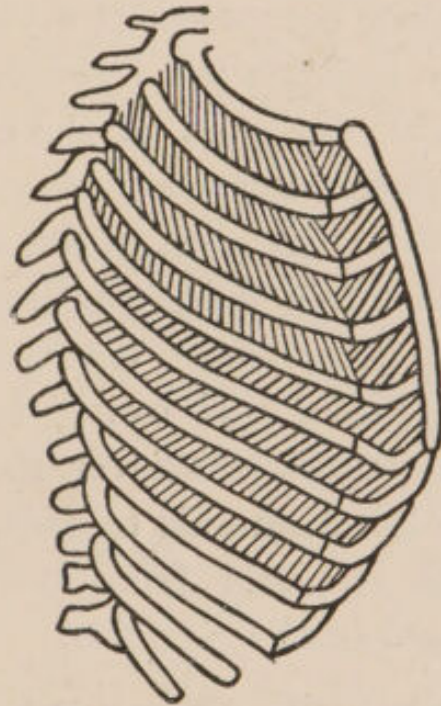


Fig. 12.—THE SIDE OF THE CHEST.

Showing the twelve Ribs, attached to the twelve Dorsal Vertebrae. Note how the Cartilages increase in length. The muscles joining the ribs are the Intercostals, the External Intercostals in the first four intercostal spaces, the Internal Intercostals in the second four intercostal spaces and between the Costal Cartilages.

(twelve dorsal vertebrae) at the back (Fig. 12). The spine curves in a backward direction and so increases the size of the chest cavity. This enlargement of the back of the chest is still further increased by a backward bulging of the ribs on each side of the spinal column. There are twenty-four ribs in all, twelve on each side—the same number in the male as in the female; they are fixed by joints to the spine at the back and to the sternum by cartilages in front; they are placed obliquely, being higher at the back than in front; they somewhat resemble a bow in

shape. The ribs increase in length, in obliquity, and in the size of their bows from above downwards as far as the seventh or eighth; the lengths of the cartilages between the ends of the ribs and the sternum also greatly increase from the first down to the seventh (Fig. 12); these cartilages being composed of a yielding elastic substance considerably increase the freedom of movement of the chest wall. The cartilages of the eighth, ninth, and tenth ribs are joined together, the cartilages of the eleventh and twelfth ribs are quite free. The seven upper ribs are called *true ribs*, the lower five *false ribs*, and the last two *floating ribs*. Whenever the ribs move they are raised upwards, and owing to their peculiarity in shape and arrangement, whenever they are raised the chest wall is expanded from side to side, *especially at the level of the seventh rib*, and from before backwards by the thrusting forward of the sternum.

26. The Breathing Muscles.—Between each pair of ribs are two muscles with fibres running obliquely downwards, called the *external and internal intercostals*. The fibres of the outside muscle run downwards and inwards (Fig. 12, upper part), those of the inside muscle run downwards and outwards (Fig. 12, lower part): these raise the ribs when they contract and so increase the size of the chest from side to side and from before backwards. The lungs because of the air-pressure follow the movement of the chest wall, and air goes into them whenever the chest cavity is enlarged.

27. The Floor of the Chest.—A muscle called the *diaphragm* forms the floor of the chest, and separates the chest from the abdomen (Fig. 13). It consists of muscular fibres outside, where it is attached to the cartilages of the

six lower ribs, to the sternum, and to the spine, and of a membranous tendon inside (Fig. 14).

When at rest the diaphragm is curved or arched upwards, forming a convex floor for the chest, on the centre of which is situated the heart, and on the outsides the lungs, it also forms a domed-shaped roof for the abdomen (Fig. 13). In the dome are placed the liver on the right and the stomach and spleen on the left.

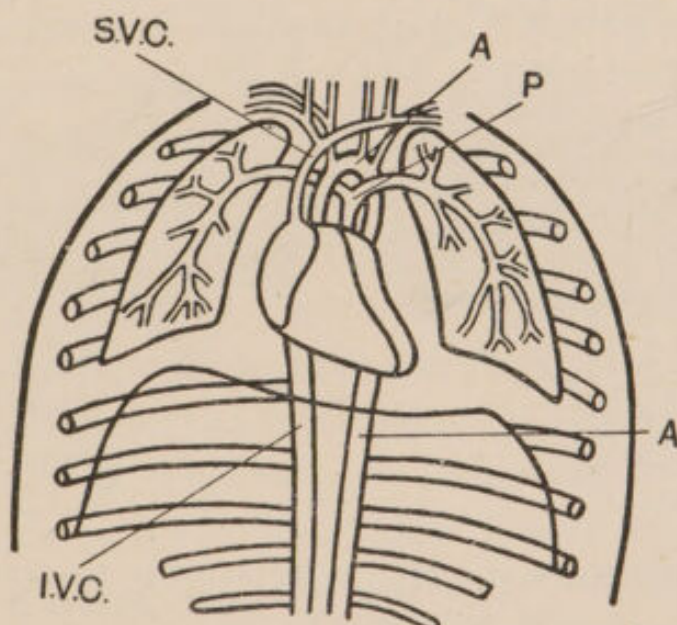


Fig. 13.—DIAGRAMMATIC SKETCH OF THE DIAPHRAGM,

Forming an air-tight partition between the Chest and the Abdomen. The Chest contains the Heart and the Lungs. Into the Right Curve, which is the larger of the two curves of the Diaphragm, fits the Liver, and into the Left Curve the Stomach. Upon the tendon rests the Heart. P, the Pulmonary Artery, sending branches into each lung from the right side of the heart; A, the Aorta, shaped like a crooked walking stick, sending off branches to different parts of the body from the left side of the heart; SVC, Superior Vena Cava; IVC, Inferior Vena Cava, carrying venous blood to the left side of the heart.

28. The Actions of the Diaphragm.—When the arched diaphragm contracts it flattens, when it flattens at its lowest point it pushes down the organs contained in the dome before it; the abdomen has to change in shape to allow of the new position of the organs, and its front wall is protruded.

If the protrusion of the front abdominal wall is prevented while the diaphragm flattens, the ribs are raised and are carried outwards, and both the lower part of the

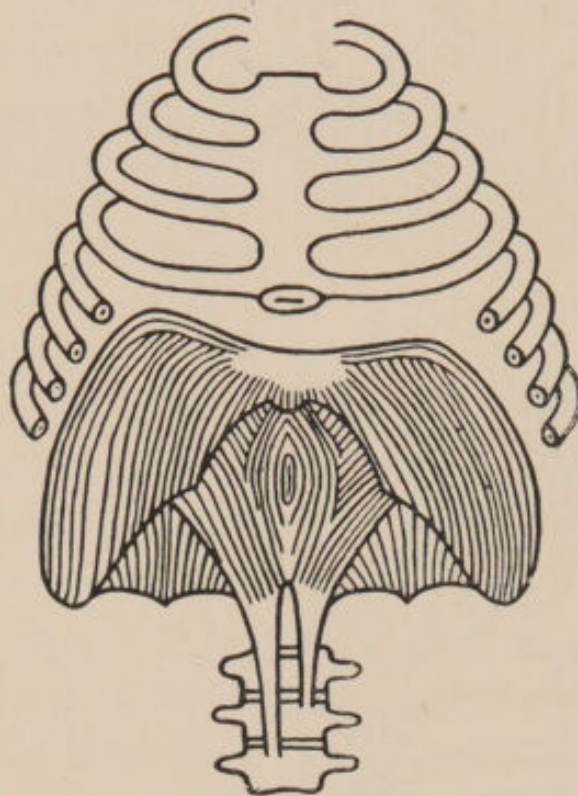


Fig. 14.—THE DIAPHRAGM AT REST.

Tendon in centre; muscular fibres at sides, back and front. Curved higher on right side than on left side.

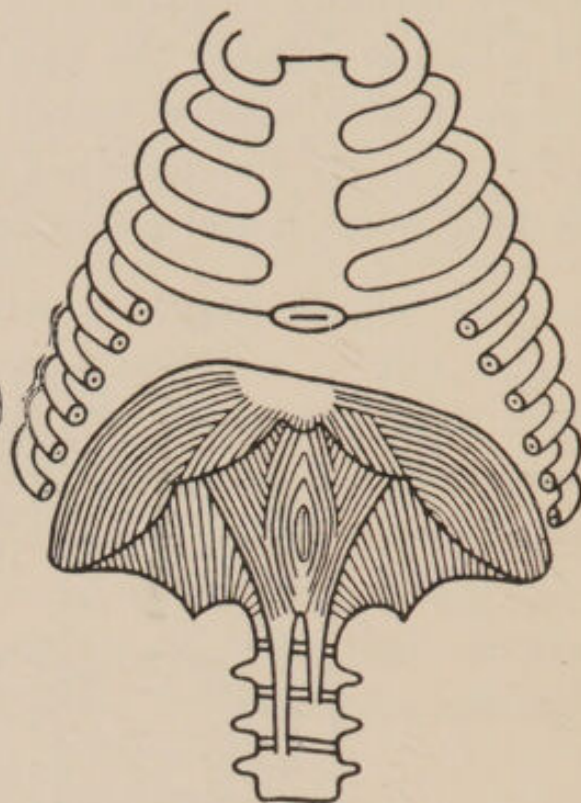


Fig. 15.—THE DIAPHRAGM CONTRACTED AND FLATTENED IN BREATHING FOR VOICE.

The Tendon has scarcely moved, and the Diaphragm has moved more on the left than on the right. It is lower and wider than when at rest.

The Diaphragm is very like an umbrella in shape, more widely open in Fig. 15 than in Fig. 14.

When the Diaphragm is contracted in breathing for voice the chest becomes longer, deeper, and wider. The lower ribs are raised and moved outwards, the lower part of the sternum is pushed forward, and the chest is increased in size from side to side and from before backwards. The lowering of the sides of the Diaphragm about one inch increases the diameter from above downwards. If the ribs are fixed as in abdominal breathing the Diaphragm descends much lower, usually about three inches.

chest and the upper part of the abdomen are increased in size from side to side and from before backwards (Fig. 15).

These separate actions of the diaphragm materially affect the methods used in breathing. The first action is used in

the breathing of repose, and the second action in the breathing for action and for voice.

29. Breathing of Physical Education.—Teachers of Physical Education make use of a form of breathing, which they call “deep breathing.” During inspiration they stretch the chest by bending the head and spine backwards, or by dragging the shoulders backwards, or by forcing the abdomen inwards. This form of breathing brings into play what are called in medical language “the extraordinary muscles of respiration” (a form of breathing used by patients suffering from an obstruction in the air-passages). This kind of inspiration not only stiffens the chest and gives too much work to the upper part and too little to the middle and lower parts, but it hampers the action of the true respiratory muscles, the intercostals, and the diaphragm. Inasmuch as it causes too much movement of the upper part of the chest as compared with the other parts, it ought to be called “high breathing,” not “deep breathing.” This laboured movement of the upper chest in inspiration cannot be easily controlled during expiration and is altogether unfit for voice. *The chest wall must be kept as free as possible.*

CHAPTER IV.

CONTROL OF THE BREATH.

30. Breathing for Voice.—Inasmuch as the outgoing air has to be carefully regulated and compressed for voice, it is necessary to secure that method of breathing whereby the muscles are placed in the most advantageous position to do their work economically and efficiently. During inspiration the front abdominal wall should be kept quite still, that is to say the abdominal muscles should not be actually contracted or relaxed, but in a condition of tonicity. The ribs not being fixed will be carried upwards and outwards by the contraction of the intercostal muscles and of the diaphragm, and the chest will be increased in size from side to side; the base of the sternum will be carried upwards and forwards, and the chest will be increased in size from before backwards; the diaphragm flattens, and the chest will be increased in size from above downwards. Air will flow into the expanded chest to fill up what would otherwise be a vacuum. This completes the inspiration. If the ribs are fixed, the diaphragm in its contraction will be carried downwards, the organs in the abdomen will be pushed downwards and the front abdominal wall will be protruded; this constitutes the so-called abdominal breathing, that has proved so harmful to the voice, to the health, and to the figure.

Before, however, the inspiration can be performed with the ease that is required for tone-production, the chest wall must have been made elastic by the regular practice of exercises particularly directed to the movement of the seventh and eighth ribs, where the chest possesses the longest cartilage, the greatest curve, the longest and most oblique ribs (Fig. 12), and consequently *where it is endowed by nature with the greatest amount of elasticity.*

31. Breathing Exercises :—*

1. Stand in the erect position, place the palms of the hands upon the sides of the chest on a level with the bottom of the breast-bone. Breathe in through the nose and direct the air to that part of the chest covered by the hands.

(a) Breathe in quite a small quantity of air.

(b) Breathe in a moderate quantity of air.

(c) Breathe in a large quantity of air.

In each case emit the air slowly through the open mouth (which should be shaped for the vowel sound "ah"), making the length of the expiration to correspond to the quantity of air breathed in, and keeping the outward flow even and steady all the time.

2. Press the front abdominal wall in (the abdominal press) and let it go out again. This movement should take place in the middle and lower part of the abdomen.

3. Combine Exercises 1 and 2 as follows :—Keeping the front abdominal wall straight, breathe in as in Exercise 1. While breathing out through the mouth make use of the abdominal press as in Exercise 2.

* For more breathing exercises the reader is referred to the author's book on *Breathing for Voice-production*, published by Novello.

The chest enlarged in this manner can take in the largest quantity of air in the easiest possible manner.

32. Compression of Air.—Having taken in the requisite quantity of air it is necessary to economise it for voice. It must be compressed by a contraction of the abdominal muscles while the diaphragm and intercostals keep contracted and hold the ribs outwards. The floor of the chest is pushed upwards by the contraction of the abdominal muscles, and air is made to pass through the glottis, the vocal cords vibrate, the column of air is resisted at the top by the roof of the mouth and by the roof of the nose, the compression is kept up from below by the abdominals as long as voice is made, which is really the result of the vibrations of the compressed column of air from the diaphragm upwards. The column is easily held controlled between the roofs of the mouth and nose and the floor of the chest, and only just that portion allowed to flow out of the nose and mouth that is required.

33. The Resistance.—The cords, having a backward pressure from the upper end of the vocal apparatus almost equal to the pressure from the diaphragm, can vibrate both ways, upwards and downwards, quite easily and cannot possibly be strained. Nor is there, if this method is properly used, any danger of the shock of the glottis occurring which has caused so much loss of voice among voice-users. The vocal attack can be made with precision by this contraction of the abdominal muscles (the abdominal press), and the finish of a sound can be made equally distinct by taking off the abdominal press, that is by relaxing the abdominal muscles.

34. Sustaining the Breath.—In speaking or reading, the subject-matter is divided up into phrases, and if the

abdominal press is used, as directed above, the voice will be sustained right to the end of each phrase. Thus one of the greatest faults in reading or speaking is overcome, namely that of allowing the voice to fall away at the end of each phrase to such an extent that the audience have to guess the last sound or perhaps the last two sounds. This fault completely kills musical speech and prevents the real meaning of the subject-matter from being clearly conveyed to the hearers. It leads to loss of voice sooner or later in those who have much voice-work to do, for the pressure is not sufficiently equalised on both sides of the cords, and they become strained; and it is impossible to keep the voice placed upon the bony vaults of the mouth or nose. If the voice continually strikes against the soft parts, it will cause tension and friction and so congestion of those parts; hence one of the causes of the so-called *clergyman's sore throat*.

35. Prevention of Breathy Sounds.—By the regulation and timing of the abdominal press, and by the careful placing of the upper end of the column of air, the breath is brought to the cords at the right time. Voice appears to be sounded in the front of the face as soon as the abdominal press is made, and to be stopped when that press is taken off. This prevents any kind of breathy sound from the escape of air between the cords before they are approximated, which also has a damaging effect upon the delicate vocal bands. This seems to be the explanation of the old Italian method of thinking of the sound before making it. Concentrate the attention upon the front of the face, then make the abdominal press. This will prevent shock of the glottis and also breathy sounds.

CHAPTER V.

THE ARTICULATORY APPARATUS.

36. Articulation and Pronunciation. — Strictly speaking the term *articulation* should be applied to those movements of the articulatory apparatus whereby the outgoing vibrating air is either completely or partially stopped and consonants are produced; it will be more convenient to make it as a heading to include *pronunciation*, by which is meant the moulding of the shape of the articulatory apparatus for the vowels. The apparatus is common to both, but *pronunciation is engaged in vowel sounds and articulation in consonant sounds*; in fact consonants are by some writers well named articulations.

37. Resonating Chamber. — *The Articulatory Apparatus consists of the Pharynx, the Mouth, and the Nose.* These together with the chest form the part of the vocal apparatus called the *Resonating Chamber*. The resonating chamber provides the harmonics and partials, which, added to the original note produced by the vibration of the vocal cords, give the tone colour to the voice; in order to get these extra vibrations, the vibrating column of air must be placed upon the bony roof of the mouth, or nose, or both, for muscles cannot be made to vibrate in answer to

vibrating air (it is much the same as directing the voice

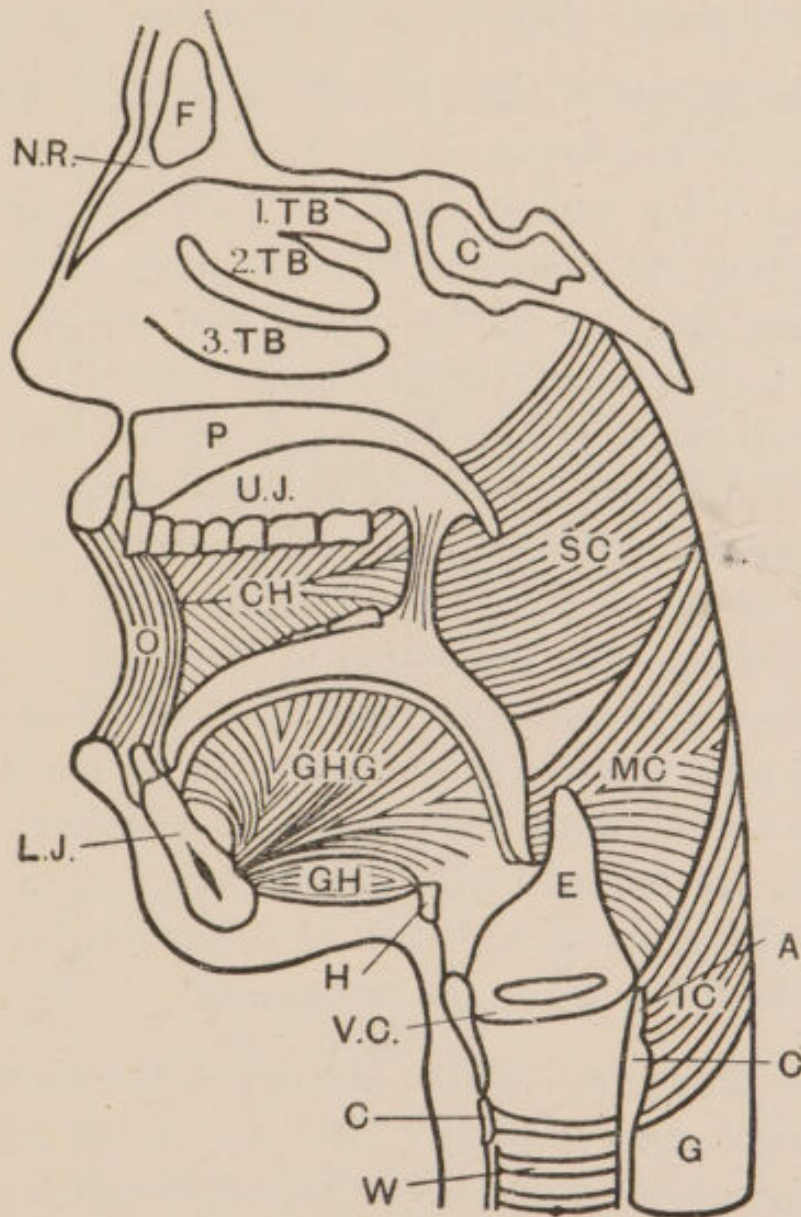


Fig. 16.—THE ORGANS OF ARTICULATION AND THEIR MUSCLES.

The Mouth, showing CH, the Muscles of the Cheek; O, the Orbicular Muscle of the Lips.

The Tongue and its Muscles, GHG, Genio-Hyo-Glossus; GH, Genio-Hyoid.

The Pharynx and its three Constrictors, SC, MC, IC, Superior, Middle, and Inferior.

The Nose and its three Turbinate Bones, 1TB, 2TB, 3TB.

UJ, Upper Jaw; LJ, Lower Jaw; P, Palate, prolonged into uvula at back, at side into front pillar of throat; NR, Nasal Roof; F, Cavity in skull over eyes; C, Cavity in bones at back of nose; H, Hyoid Bone (tongue bone); E, Epiglottis; VC, Vocal Cords; C, Cricoid Cartilage; W, Windpipe; G, Gullet.

upon curtains when speaking or singing: the curtains absorb the vibrations rather than add to them). By this

placing of the voice a resistance is given to the top of the vibrating column of air in speech and song.

38. The Mouth.—The mouth is a large resonating cavity forming the lower of the two apertures by which the air and voice escape from the body (Fig. 16); it is separated from the other aperture, the nose, by the palate, which forms the roof of the mouth and the floor of the nose; the front part of the palate consists of bone, which is fixed and is called the *hard palate*; the back part is muscle, which is very movable and is called the *soft palate*. The soft palate is prolonged into two arches at the side called the *arches* of the palate (or pillars of the fauces), and into a grape-like projection in the centre called the *uvula*; these prolongations consisting of muscle can be contracted and moved in such a way as to cut off either the mouth or the nose from the lower pharynx, in which action they are helped by the *constrictors*. They can also so modify the shape of the back of the mouth as to make considerable difference to the resonance.

39. The Tongue.—At the bottom of the mouth is the *tongue*, which can completely alter the shape and resonance of this cavity; it is a muscular organ which can move in all directions, forwards, backwards, upwards, downwards, from side to side, either as a whole or in part, so that the tip, middle, or back can be moved separately; it can be folded upwards and downwards or at the sides, and can be made to vibrate (Fig. 17). It can prevent any air from going into the mouth by being raised to meet the soft palate at the back, as when sounding *NG*, *K*, or *G*, or it can stop the air farther forward in the mouth by its tip being made to touch the hard palate just behind the upper front teeth, as when sounding *N*, *T*, or *D*, or a little

farther back for *SH* or *ZH*. The movement of the tongue modifies the sounds of the vowels and an infinite variety of vowel sounds can be thereby produced.

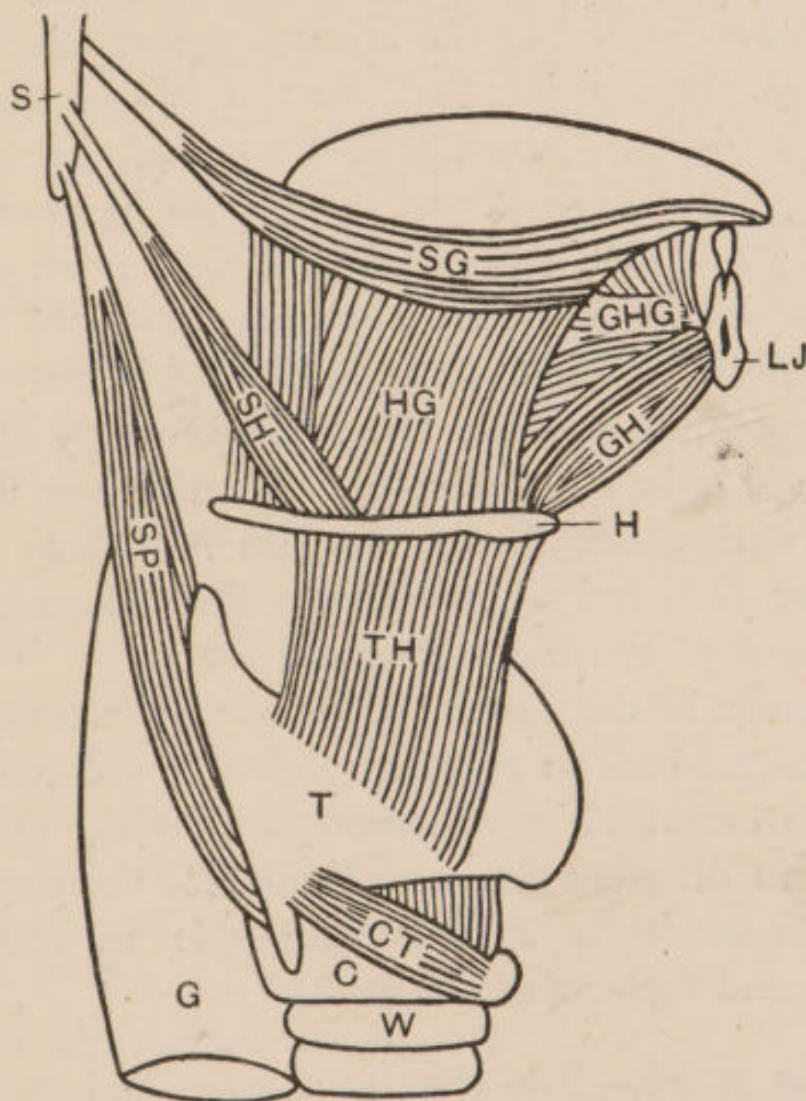


Fig. 17.—MUSCLES OF THE TONGUE AND LARYNX (OUTSIDE).

- | | | |
|----------------------------|---|--------------------|
| Tongue Muscles | { HG, Hyo-Glossus
GHG, Genio-Hyo-Glossus
SG, Stylo-Glossus. | { Hyoid to Tongue. |
| Hyoid Muscles | { GH, Genio-Hyoid—Hyoid to Jaw.
SH, Stylo-Hyoid—Hyoid to Styloid Process. | |
| External Muscles of Larynx | { TH, Thyro-Hyoid—Thyroid to Hyoid.
CT, Crico-Thyroid—Cricoid to Thyroid.
SP, Stylo-Pharyngeus—Larynx to Styloid Process. | |
- S, Styloid Process; G, Gullet; H, Hyoid Bone; C, Cricoid; T, Thyroid;
W, Windpipe; LJ, Lower Jaw.

Vowels are classified by phoneticians, according to the part of the tongue moved in their production, into *front*

vowels such as *i: e*, and *e:* and *back vowels* such as *ɔ: o:* and *u:*

40. Movements of Mouth.—The front and sides of the mouth are formed by the lower jaw, and the teeth, the cheeks, and the lips (cf. Fig. 16: CH, Muscles of cheek; O, Muscles of lips). By the movement of the lower jaw and the lips the shape of the mouth can be changed in a variety of ways; each change modifies the sound. The jaw can be moved by its muscles independently of both the tongue and the lips; if, while vocalising, the tongue and lips are kept quiet and the lower jaw is slowly allowed to fall downwards by its own weight, a continuous change of sound is noticeable. If the lips are moved in and out, rounded or flattened while the jaw and tongue are still, more changes of sound are produced.

The mouth is the most important articulatory organ, since it can produce an infinite number of different sounds by the movement of its different parts; these movements combined in different degrees account for the peculiarities of the characteristic sounds noticeable in the various languages and dialects of the world.

41. The Nose.—The nose is a large and complicated resonance chamber situated between the hard palate and the base of the brain, its walls are composed of thin bony plates and cartilages (Fig. 16). It extends from the face to the pharynx, and is three inches long, two inches high, and rather more than an inch wide, including the *septum*, which divides it into two parts down the centre. Two openings can be seen in front leading into each division, and there are two corresponding openings at the back about as large as the terminal joint of the thumb. Inside, attached to the outer walls, are three hooked-shaped bones

called *Turbinated Bones*, which, being very vascular, are arranged somewhat like hot-water coils, and heat the air as it passes into the body through the nose (Fig. 16); the lining membrane of the nose is also freely supplied with glands which secrete a fluid to moisten the air, and its peculiar ciliated cells actually filter the air. It is always advisable therefore to breathe in through the nose as much as possible, for thereby the air becomes warmed, moistened, and filtered.

42. Resonating Cavities.—Besides being in itself a good resonating chamber the nose communicates with many other cavities which are excellent for resonating purposes. Hollow chambers exist in the upper jaw, in the forehead just above the eyes (Fig. 16), and in the bones at the back of the nose (Fig. 16), and all these hollow chambers open into the nose itself. *The nose and its accessory chambers may be regarded as the resonating chamber par excellence.* Just as it is necessary to compress the column of vibrating air for voice so is it necessary to compress the air throughout the resonating chamber, and the column of air must be resisted by the roof of the nose as well as by the roof of the mouth.

43. The Pharynx.—The pharynx is a muscular tube situated at the back of the larynx, the mouth, and the nose, and may for practical purposes be divided into three parts of about equal size, which may be called the laryngeal pharynx, the oral (mouth) pharynx, and the nasal pharynx. It is the funnel which connects the breathing and vibratory portion with the nose and the mouth. It is about four inches long, and reaches from the level of the Cricoid Cartilage to the level of the top of the nose. It is mainly composed of three circularly arranged muscles

called *constrictors*, which, as their name implies, are able to constrict the pharynx; during swallowing the food is

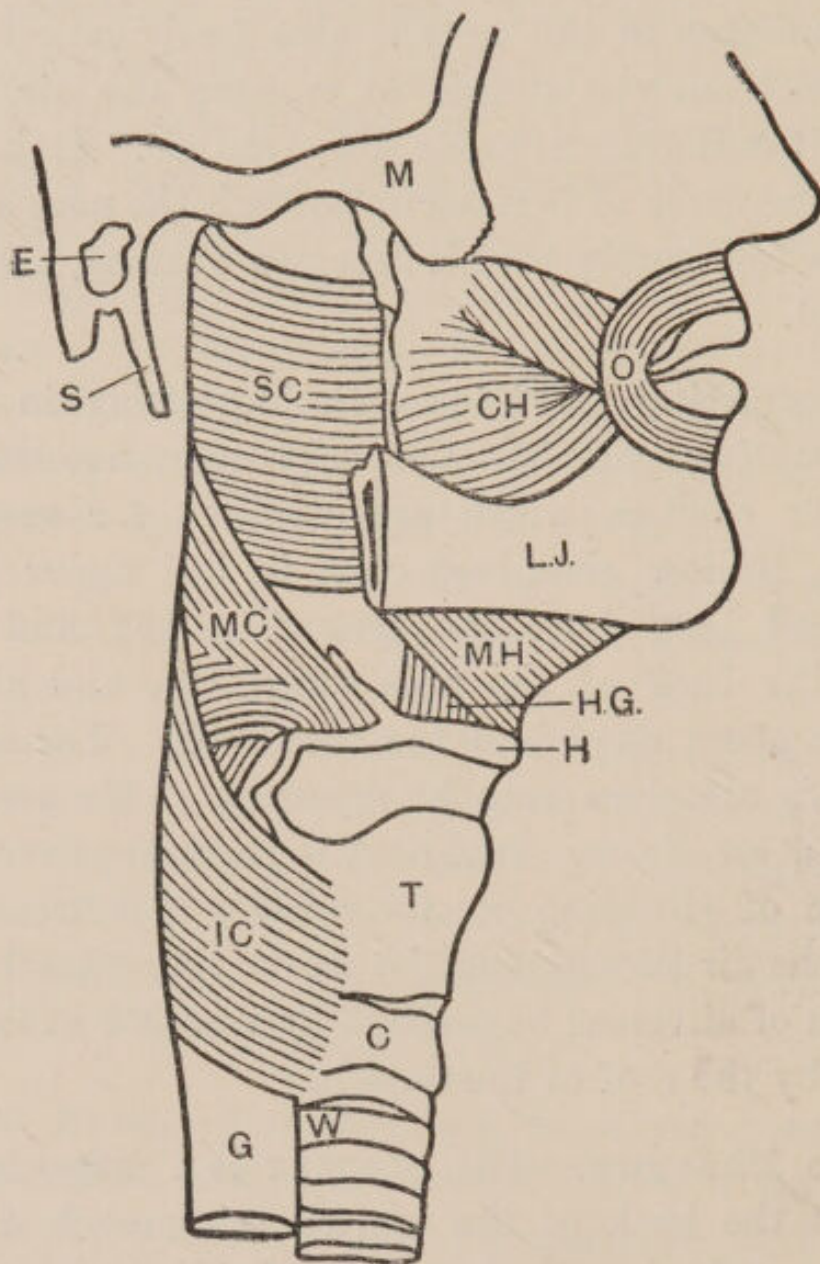


Fig. 18.—MUSCLES OF PHARYNX AND MOUTH.

SC, Superior Constrictor from inside Mouth around Pharynx; MC, Middle Constrictor from Hyoid around Pharynx; IC, Inferior Constrictor from Larynx around Pharynx; O, Orbicular Muscle of Lips; CH, Cheek Muscles; MH, Mylo-Hyoid—Jaw to Hyoid; HG, Hyo-Glossus—Hyoid to Tongue; W, Windpipe; G, Gullet; C, Cricoid Cartilage; T, Thyroid Cartilage; H, Hyoid Bone; L.J., Lower Jaw; M, Malar Bone; S, Styloid Process; E, Opening for Ear.

seized by these muscles and conveyed to the *oesophagus*, the continuation of the pharynx.

In voice the pharynx is capable of considerable expansion and contraction, and is freely movable; it can be narrowed or widened, shortened or elongated by the raising or depressing of the larynx.

The pharynx is firmly connected to the fascia over the spine and cannot be moved forwards, so that when the constrictors contract they move the front wall backwards, except at the top where they are attached to immovable parts,—there the sides are flattened. They pull the larynx back and up, and assist the soft palate in shutting off the mouth or the nose according to circumstances.

To acquire proficiency in articulation it is necessary to exercise those muscles upon whose action the correct position for enunciation depends, and upon whose movement the pure sounds result. This includes exercises for the muscles which move the lips, the tongue, the soft palate, and the teeth (*i.e.* the lower jaw).

44. Exercises for the Lips.

1. The muscle to be especially developed is the muscle that sends fibres in a circular direction right round the mouth, and is named accordingly the orbicular muscle of the lips (*orbicularis palpebrarum*). This can be done easily by spreading the mouth sideways, as in a smile, and then quickly moving the lips to a rounded shape, as for the *oo*-sounds.

2. Other muscles also are brought into play which raise and lower the upper lips, and these can be exercised by a movement of the upper lip upwards and downwards, simulating the movement of a rabbit's mouth.

3. The movement of the lips in the pronunciation of each of the vowel sounds should be daily practised in front of a mirror.

4. Also the movement of the lips necessary for the labials *P* and *B*.

5. Also the movement of the lower lip to the upper teeth for *F* and *V*.

6. Also the movement of the lips forward for *W*, *Wh*, *Sh*, *Th* (let the mouth spring open after all the consonant sounds).

7. Each of these consonant sounds should be practised in order, both before and after the chief vowel sounds.

45. Exercises for the Tongue.

1. Stand in front of a mirror, open the mouth wide, work at the tongue until it can be made at will to lie down quite flat in the mouth, its tip and edges against the lower teeth, and no part of it higher than the top of the lower teeth.

2. From the flat position of Exercise 1, raise the tip of the tongue slowly to the back of the gums of the front teeth and return to the original position.

3. From the flat position, raise the edges of the tongue so as to make it concave from side to side, return to the flat position.

4. Practise the chief vowel sounds, and note that the tongue takes its right position for each without being rigid, sounding each three times.

5. Practise the consonants whose sounds depend largely upon the tongue in the following order, sounding each three times:—*N*, *Th* (initial and final), *D*, *T*, *L*, *R*, *Z*, *S*, *ZH*, *SH*, *NG*, *K*, *G*.

6. Push the tongue straight forward out of the mouth as far as possible and draw it back smartly.

46. Exercises for the lower Jaw.

1. Open and shut the mouth several times in succession

by allowing the lower jaw to fall by its own weight, direct the movement towards the upper part of the chest. Keep the tip of the tongue against the back of the lower teeth and the body of the tongue quite flat in the mouth.

2. Sound the chief vowels in the following order: -oo, -oh, -aw, -ah, -ay, -ee. Let the lower jaw fall equal distances until at *ah* the teeth are separated by two finger widths, close smartly for *ay* and *ee*, at the same time allowing the front part of the body of the tongue to rise to the front side teeth at the top, keeping the tip against the lower front teeth. Care should also be taken that the lips keep their proper shape throughout these changes, and that the corners are drawn inwards for the first four, and are drawn outwards for the last two.

3. Push the chin forward in a straight direction, then smartly draw it in again to develop the back neck muscles.

47. Exercises for the Soft Palate.

1. Inhale through the nose with the mouth wide open, and exhale through the mouth. This exercise is excellent for both the soft palate and the tongue. In inhaling through the nose, the tongue is raised at the back and the soft palate is depressed to meet it; in exhaling through the mouth, the tongue is flattened and the soft palate raised.

2. Practise the "NG" sound followed by the "AH" sound six times in succession, and each time endeavour to keep both the tongue and the soft palate free from rigidity while they are making the same movement as in inhalation through the nose.

CHAPTER VI.

DISTINCT ARTICULATION.

48. Tone in Speech.—Although a speaker should not actually “sing” in his speech, he should endeavour to make his speech as musical in quality as possible, for all his effects are entirely dependent upon tone. Without tone the meaning of the spoken words becomes uncertain, the voice becomes inaudible at a distance, the vocal organs being improperly used become damaged and hoarseness or complete loss of voice follows. It is chiefly on account of the damaging effect that faulty voice-production has upon the vocal apparatus that tone in speaking should be placed in importance even before audibility and distinctness, for by the use of too great an effort in the striving for audibility and distinctness the voice is sooner or later lost. Strained vocal methods and shouting may produce audibility and distinctness for a time, but the voice is decidedly unpleasant, not to say irritating, and is bound to suffer from prolonged use.

49. Its Tonic Effect.—The voice-user who learns to speak with tone need never be afraid of weakening his voice, for the kind of voice-production that must be used to produce tone has a tonic effect upon all the organs concerned in voice; the voice becomes strengthened, slight throat and nasal affections often disappear, both audibility and distinctness are produced with a minimum amount of exertion, and the meaning is quite easily and surely conveyed to the audience.

50. Song and Speech.—There is considerable difference between the speaking and the singing voice, but inasmuch as purity of tone upon the chief vowel sounds can be more easily acquired by singing than by speaking, it is advisable in practice to work at the singing voice first and deal with the differences later on.

The chief *differences between speech and song* are in musical quality, stability and duration, pitch, and pace.

51. Musical Quality.—The frictions caused by the articulations are decidedly unmusical, yet they must be prominently sounded in speech, or the speaker will fail to be distinct; in song they can be so very much diminished as to become quite insignificant. The singer can even modify the vowel sounds to suit the pitch without seriously affecting the meaning of the song. The speaker must bring out the full sound of the vowel and must make a clear distinction between the principal and the subordinate vowels.

52. Pitch.—The pitch in speech is not sustained and definite as it is in song—all the time the voice is gliding through slightly different pitches; this change of pitch is usually confined to about five notes (rarely an octave is used). The singer uses two octaves.

53. Duration.—The pace in speech, or the length of time the voice dwells upon the vowel sound, depends upon the sentiment or meaning of the passage, or upon the meaning of the word itself, which may contain a principal or a subordinate vowel: in verse, on the accent and quality of the verse; verse being in this respect intermediate between speech and song. In song melody determines the length.

54. The Classification of Sounds.—The elements of speech consist of sounds which can be classified according to the origin of their vibrations in the vocal apparatus.

(a) Those whose origin is in the larynx—the vowels.

(b) Those whose origin is partly in the larynx and partly in the mouth—the voiced articulations.

(c) Those whose origin is in the mouth—the breath articulations.

In class (a) the voice-passage above the vocal cords is open, but altered in shape for the particular vowel required; in classes (b) and (c) the voice-passage is either partially or completely closed. There is no vibration of the articulating organs themselves in vowels* and therefore the sonorousness and tone-producing qualities of these sounds are great; well-marked vibration of the articulating organs is set up by the consonants, and this vibration mars the purity of tone of the voiced consonants, and destroys that of the breath consonants. The breath consonants consist only of articulatory vibrations (not of tone vibrations whose purity has been destroyed).

* In a whisper it seems as if the vowels were merely articulated. What really takes place is, that the resonances of the cavities of the mouth, shaped for each vowel, are excited by the vibration of air under strong friction instead of by the vibrations of the voice. Under these conditions the distinctive quality of each vowel sound is particularly clear, just as in song it becomes slightly weakened by the overpowering strength of the musical vibrations of the voice.

CHAPTER VII.

THE VOWEL SOUNDS.

55. Classification of the Vowels.—Vowels are usually divided into *long* and *short*, and to each long vowel there is supposed to be a corresponding short vowel; really this is not strictly true in the case of English sounds, for the difference between them is one of quality as well as quantity. The principal vowel sounds used in singing may be represented as follows: *oo*, *oh*, *aw*, *ah*, *ay*, *ee*, and each should be sung as if it consisted of a single sound. In speech *oh* and *ay* are pronounced as if they consisted of two distinct sounds, *ohoo* and *ayee*, and hence should be called diphthongs, a *diphthong* being a combination of two vowel sounds. The five letters which represent our English vowels are diphthongs and are pronounced *ayee*, *ee-y*, *ahe*, *ohoo*, *y-oo*. Confusion always exists between the sound and the letters that represent that sound; phoneticians to some extent get over the difficulty by the use of symbols, giving one sign for each sound. To help the student both the sound and its phonetic sign are given (the signs used being those of the Association Phonétique Internationale, as in Dumville's *Science of Speech*).

56. Phonetic Signs.—The phonetic signs given to the chief vowel sounds are as follows:—

OO as in *Noon*—phonetic sign *u:* (the colon after the vowel signifies that it is long). Its subordinate OO as in *nook*—phonetic sign *u*.

OH as in *No*—phonetic sign *o:* In speech OH is a diphthong *ohoo*, but in song it is given the Northern pronunciation of *oh* as in *boat*. Its subordinate is said to be the sound heard in the word *Nut*—phonetic sign *Λ*.

AW as in *Naught*—phonetic sign *ɔ:* Its subordinate O as in *Not*—phonetic sign *ɔ*.

AH as in *Ah*—phonetic sign *a:* Its subordinate A as in *Gnat*—phonetic sign *æ*. Phoneticians introduce another sound and sign *a*, which represents the Northern pronunciation of the word *fat*; it is the sound heard in the French word “*Chat*,” as distinguished from the sound of the Persian title “*Shah*” (which gives the sound of *a:*).

AY as in *Nay*—phonetic sign *e:* In speech a diphthong *ei*, in song a sound as in the word *nay*. Its subordinate E as in *Net*—phonetic sign *e*.

EE as in *Knee*—phonetic sign *i:* Its subordinate I as in *Knit*—phonetic sign *ɪ*.

ER as in *Her*—phonetic sign *ə:*

57. Narrowing of Vowel Sounds.—It will be noticed that of these sounds the signs *u*, *ɔ*, and *i* represent so-called long and short sounds and the dots are added to show the difference; the other sounds possess different signs for their subordinates. A very common fault noticeable in speech is that of narrowing the vowel sounds, and consequently losing tone by making the opening for the breath too small, it sounds often as if the subordinates were substituted for the more important sounds,

and it seems reasonable to accept the terms *narrow* and *wide* as used by some phoneticians instead of short and long; it is difficult for the voice-producer to allow that a difference in the tension of the tongue muscles makes a long vowel into a short one, because one of the fundamental principles of voice-production is, that there should be no rigidity of any muscles; but it is quite conceivable that the tongue is "bunched up," as Sweet says, and that this narrows the passage.

58. Shaping for Vowel Sounds.—The purity of tone-production depends so very much upon the proper shaping of the mouth cavity for vowel sounds, that it is necessary to define accurately the exact shape belonging to each principal vowel. OO, OH, AW (u : o : ɔ :) are called *back* vowels only because the tongue is raised at the back, highest for oo and lowest for aw, the pressure of tone is felt at the front. AH (a :) is the *neutral* or *flat-tongued* vowel, while for AY (e :) and EE (i :) the tongue is *raised* in front, higher for EE. It will be noticed that the lower jaw moves with the tongue, it is highest for OO and EE and lowest for AH. The lips are parted until the corners of the mouth are obliterated for AH; they are protruded and rounded as in pouting for the back vowels; they are widened, that is their corners are drawn outwards, for the front vowels as in a smile.

59. TABLE OF VOWEL SOUNDS.

Noon u :	{	Tongue raised high at back.
Nook ʊ		Lips well protruded and well rounded.
		Jaw raised so that teeth are fairly close together.
No o :	{	Tongue raised at back (not so high as for u :).
Nut ʌ		Lips protruded and rounded.
		Jaw lowered to separate teeth.

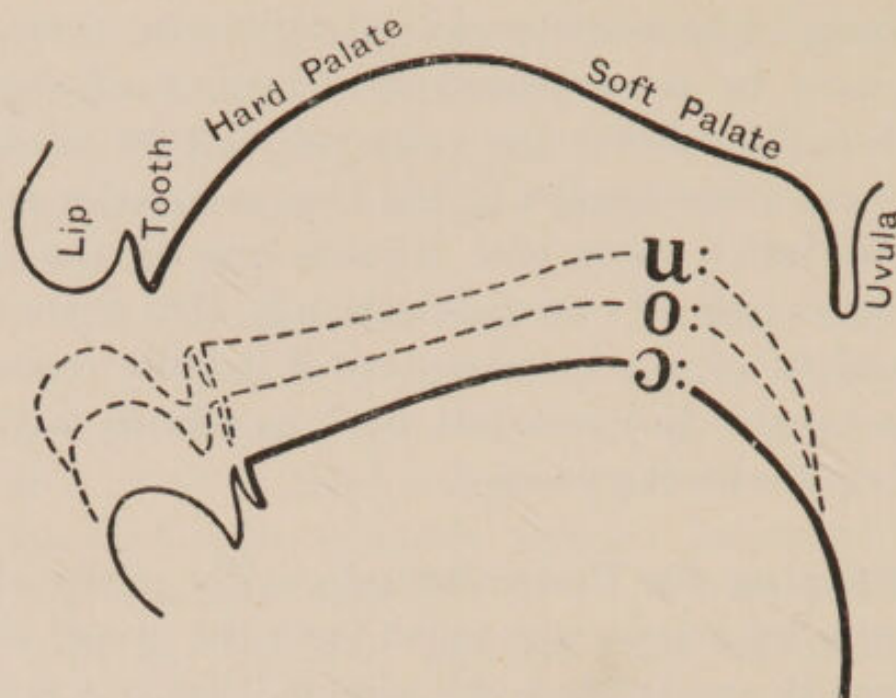
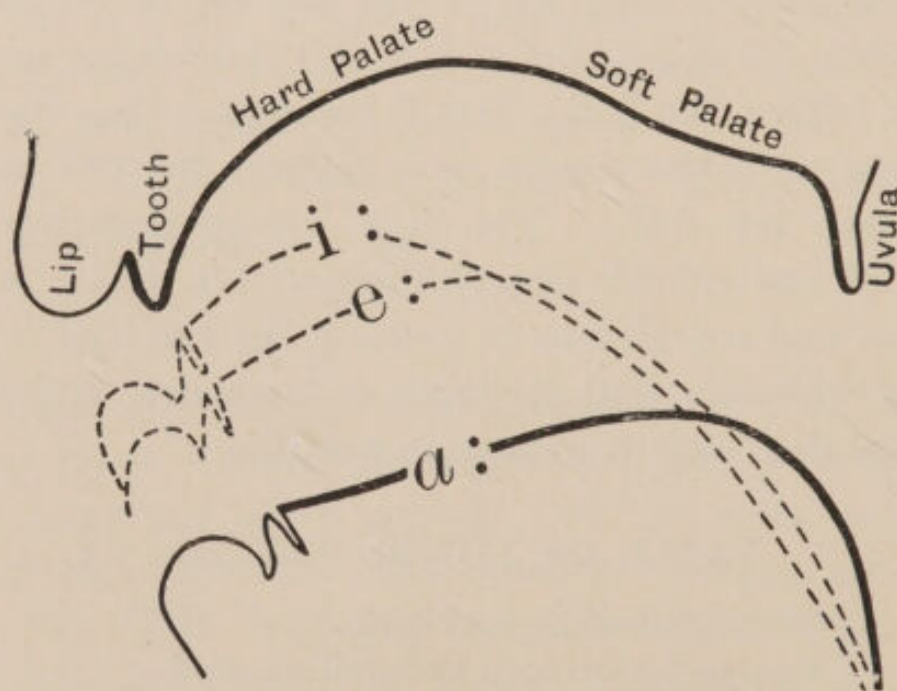


Fig. 19.—THE BACK VOWELS.

This diagram shows the different positions of the tongue, the, lips and the teeth
For description see Table of Vowel Sounds.

Fig. 20.—THE VOWEL *a* : AND THE FRONT VOWELS.

Showing the different positions of the tongue, lips, and teeth. See Table of Vowel Sounds.

<i>Naught</i> ɔ:	{	Tongue slightly raised at back.
<i>Not</i> ɔ		Lips slightly protruded and rounded.
	{	Jaw well lowered to still more separate teeth.
<i>Ah</i> a:	{	Tongue flat, low, and relaxed.
<i>Gnat</i> æ		Lips, sides nearly parallel, corners obliterated.
	{	Jaw allowed to fall by its own weight to get mouth well open.
<i>Nay</i> e:	{	Tongue raised in front.
<i>Net</i> e		Lips parted showing teeth, corners drawn outwards.
	{	Jaw raised.
<i>Knee</i> i:	{	Tongue still more raised in front.
<i>Knit</i> i		Lips parted showing teeth, corners drawn outwards as in a smile.
	{	Jaw raised so that teeth nearly touch.

N.B.—For all the above sounds the tip of the tongue must be kept well forward in the mouth (this is opposed to the usual teaching of phoneticians). Rigidity of the muscles must be rigorously avoided.

60. The Vowel OO (u:) and its subordinate oo (u).

Noon.—Place the little finger between the teeth, so that when the teeth are closed upon the finger, the upper teeth rest upon the middle of the nail and the lower teeth touch the under side of the finger opposite to the middle of the nail. Place the tip of the tongue in the angle formed between the little finger and the lower teeth. Wrap the lips loosely around the finger well in front of the nail so that they are protruded.

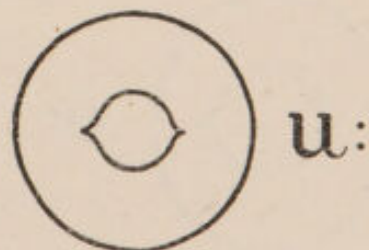


Fig. 21.—THE SHAPE OF THE LIPS FOR THE VOWEL OO as in *Noon*.

Nook.—Similar position, but flatter than OO, with usually a shortened expiration cutting off the vibration of the cords.

Wh (as in who) *and* **w** (as in wood).—The sound *w* is often called a semi-vowel; the position is very similar to that for *oo* and should be practised with it. The aspirate in the *wh* sound introduces a rush of air. Really *wh* = *HOO*.

She left the web, she left the loom,
She made three paces through the room,
She saw the water-lily bloom,
She saw the helmet and the plume.

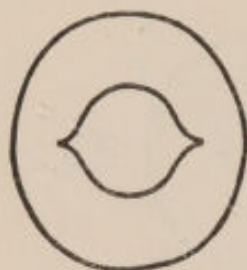
Who spoke of brotherhood? Who spoke of love?
Who told me how the poor soul did forsake
The mighty Warwick and did fight for me?

The portrait of an old Whig in a brown wig.

He woo'd the woman, but she would not wed.

61. The Vowel *Oh* (o:) and its subordinate *u* (Λ).

No.—Sound in turn slowly the five vowel sounds and note the way in which the lower jaw does its work.



O:

FIG. 22.—THE SHAPE OF
THE LIPS FOR THE
VOWEL *Oh* AS IN *No*.

From *OO* to *Ah* it gradually drops and then sharply rises again for *Ay* and *EE*. It is very necessary that the lower jaw should be made to do this movement correctly without any rigidity. It must fall by its own weight and be raised by muscles that are quite elastic. The approximate distance between the teeth for *OO* is a quarter of an inch, for *Oh* half an inch, for *Aw* three-quarters of an inch, and for *Ah* an inch, for *Ay* a third of an inch, and for *EE* an eighth of an inch. These intervals must be made by the movement of the lower jaw.

The thumb placed sideways will separate the teeth by about half an inch ; place the tip of the tongue under the part of the thumb overhanging the lower teeth, wrap the lips lightly around the thumb, but keep them closer to the teeth than for *OO*. The lips should not be so protruded for *Oh* as they are for *OO*, but they must not be tightened over the teeth, they should lie about midway between a pout and an affected position.

Nut.—The position is flatter than for *Oh*, and the opening of the mouth is diminished in size by the raising of the lower jaw.

Home, home, home sweet home,
There's no place like home, there's no place like home.

And slowly, slowly, more and more
The moony vapour rolling round the King.

Lead out the pageant : sad and slow
As fits an universal woe,
Let the long, long procession go,
And let the sorrowing crowd about it grow,
And let the mournful martial music blow ;
The last great Englishman is low.

Heard a carol, mournful, holy
Chanted loudly, chanted lowly,
Till her blood was frozen slowly,
And her eyes were darkened wholly,
Turned to tower'd Camelot.

All day the wind breathes low with mellow tone,
Through every hollow cave and alley lone ;
Round and round the spicy downs the yellow lotus dust is blown.

Love may come, and love may go,
But I will love no more, no more.

And from his blazon'd baldric slung
A mighty silver bugle hung,
And as he rode his armour rung
Beside remote Shalott.

62. The Vowel *Aw* (ɔ:) and its subordinate *ō* (ɔ).

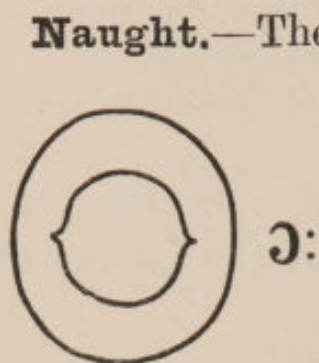


Fig. 23.—THE SHAPE OF THE LIPS FOR THE VOWEL *Aw* AS IN *Naught*.

Naught.—The teeth are three-quarters of an inch apart; the first, second, and third fingers arranged as a pyramid, with the first and third as the base and the second as the apex of the pyramid, should be inserted into the mouth. Wrap the lips loosely around the fingers. The rims of the teeth should be allowed to be just visible inside the lips when the fingers are removed.

The tip of the tongue must be just behind the lower teeth, this will keep the tongue forward; the great fault in the *Aw* sound is that it is kept imprisoned in the throat by the tongue being carried too far back.

Not.—Lips should be more rounded in shape and flatter than in *Aw*.

Mourning when their leaders fall
Warriors carry the warrior's pall
And sorrow darkens hamlet and hall.

Loud the convent bell appalling
From its belfry calling, calling.

They hear no sound, the swell is strong,
Though the wind hath fallen they drift along
Till the vessel strikes with a shivering shock.
Oh, heavens! it is the Inchcape Rock.

63. The Vowel *Ah* (a:) and its subordinate *ă* (æ).

Ah!—Although this sound is described by some writers as being the neutral vowel, it is by no means an easy sound to produce properly. It is true that the lips and tongue are lying practically at rest, and that the lower jaw has fallen by its own weight for the *Ah* sound in *father*, but the sound that is produced in hesitating speech (represented by the phonetic sign ə) has more claims to be called a neutral sound; it is very similar to the sound Λ.

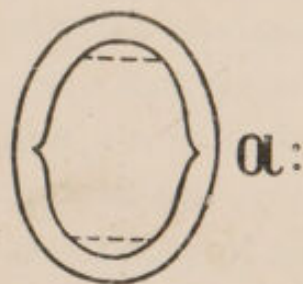


Fig. 24.—THE SHAPE OF THE LIPS FOR THE VOWEL *Ah* AS IN *Ah!* (The dotted line represents the edge of the teeth.)

For *Ah* the mouth should be widely opened from above downwards, but not spread outwards as in a smile, for this introduces an *Ay* or *EE* quality. The teeth should be an inch apart; place the first finger upon the second finger sideways and insert them between the teeth; place the tip of the tongue in the angle formed between the first finger and the lower teeth. The level of the tongue as a whole must not be raised above the level of the top of the lower teeth; the tongue must be kept flat in the mouth; a very common fault is the curving of the tongue upwards in the centre or the back. Allow the lower jaw to fall well downwards by its own weight, while the chin is well drawn in; there must not be any stretching of the muscles of the jaw or of the larynx. Separate the lips a little more than the teeth, so that the rims of both the top and bottom teeth are visible; keep the lips close to the teeth without fixing or stretching them. Draw the corners of the lips in towards the middle of the mouth until the sides of

the lips are nearly parallel and the corners are almost obliterated.

Gnat.—Scarcely any alteration in the position is required except that the tongue is slightly raised. The Northern English pronunciation of this sound is represented by the phonetic sign *a* and seems to be an intermediate sound between *a:* and *æ*; by many phoneticians *a* is said to form the first part of the diphthongs *I* and *ou*. For *a* the tongue must not be raised.

Hurrah! hurrah! a single field hath turned the chance of war;
Hurrah! hurrah! for Ivry, and King Henry of Navarre!

Sometimes a troop of damsels glad,
An abbot on an ambling pad;
Sometimes a curly shepherd lad,
Or long-haired page in crimson clad.

64. The Vowel *Ay* (*e:*) and its subordinate *e* (*e*).



Fig. 25.—THE SHAPE OF THE LIPS FOR THE VOWEL *Ay* AS IN *Nay*.

Nay.—The chief difficulties in the production of this sound are usually due to the tongue position required. The front of the tongue has to be raised, so that its sides touch the side teeth; the tongue may become rigid and the tone accordingly hard. To overcome the hardness of tone, first of all do not raise the tongue more than is absolutely necessary. In passing from the *Ah* to the *Ay* position, raise the lower jaw so that the teeth are separated by a third of an inch for *Ay*, instead of an inch as required for *Ah*; this brings up the tongue a long way without causing the tongue muscles to contract. While the tongue

muscles contract to raise the front of the tongue, keep the tip of the tongue against the back of the lower front teeth; by doing this the raised part of the tongue will be kept forward in the mouth, so that the front part of the side of the tongue touches the front part of the side teeth. The lips must be spread outwards so as to make the mouth moderately wide, and must be separated in front to a greater extent than the teeth, which must be well shown. Place the first, second, and third fingers together, insert the second finger between the teeth, let the corners of the lips touch the outer sides of the first and third fingers, but keep the upper and lower lips away from the fingers. There is a difficulty with the *Ay* sound, as it is in reality a diphthong (e : i).

Net.—The tongue is raised a little more for *e* than for *e :*

And at the closing of the day
She loosed the chain, and down she lay;
The broad stream bore her far away,
The Lady of Shalott.

There we lay, all the day,
In the Bay of Biscay, oh !

And bade her page the menials tell,
That they should tend the old man well.

65. The Vowel *EE* (i:) and its subordinate *ĩ* (i).

Knee.—What has already been said about *Ay* applies also to *EE*. The tongue is even more raised. The lips are more spread outwards. The teeth are almost but not quite closed, and are easily visible top and bottom, because the lips are separated in front by a wide interval.

The position is very similar to that of a smile. Great



Fig. 26.—THE SHAPE OF THE LIPS FOR THE VOWEL *EE* AS IN *Knee*. (The dotted line represents the edge of the teeth.)

care must be taken to keep the tip of the tongue against the back of the lower teeth and to prevent any rigidity of the tongue.

Knit.—The tongue is a little lower than for *EE*.

Y (as in Ye).—Phonetic sign *j*. The sound *y* is often called a semi-vowel; the position is very similar to *EE* and should be practised with it.

Waking and asleep,
Thou of death must deem
Things more true and deep
Than we mortals dream,
Or how could thy notes flow in such a crystal stream?

Who is this? And what is here?
And in the lighted palace near
Died the sound of royal cheer;
And they cross'd themselves for fear
All the knights at Camelot.

66. The Vowels *EE* (or *y*) + *OO* = *ū* (*ju* :).

Nude.—Pass quickly from the *EE*, or more correctly the *y* position, to that of *OO*; the diphthong sound *ū* results.

While organs yet were mute
Timotheus to his breathing flute
Come, pensive nun, devout and pure,
Sober, steadfast and demure.

67. The Vowels *Ah* + *OO* = *ou* (*a* : *u* :).

Now.—Pass quickly from the *Ah* position to that of *OO*; the diphthong sound *ou* results.

Four gray walls, and four gray towers
 Overlook a space of flowers,
 And the silent isle embowers
 The Lady of Shalott.

Let the loud trumpets sound
 Till the rocks all around
 The shrill echoes rebound.

68. The Vowels *Ah* + \check{i} = \bar{i} (*a* : **1, more correctly **a1**).**

Night.—Pass quickly from the *Ah* (*a* : or more correctly **a**) position to that of \check{i} , the diphthong sound \bar{i} results.

Yes, gold—no one can need it more than I—
 I who lurk about in dismal suburbs
 And unwholesome lanes ; I who am housed
 Worse than the kennell'd hound ; I who am clothed in rags ;
 I who am wretched, here do tell thee now
 I want the miser's gold, give me his gold.

There is no terror, Cassius, in your threats,
 For I am arm'd so strong in honesty,
 That they pass by me as the idle wind
 Which I respect not. I did send to you
 For certain sums of gold, which you denied me,
 For I can raise no money by vile means.

69. The Vowels *Aw* + \check{i} = *oi* (o** : **1**).**

Noise.—Pass quickly from the *aw* position to that of \check{i} ; the diphthong sound *oi* results.

And then she smiled in shy sweet joy
 Since but a lovely dimpled boy . . .
 Then finding him so shy and coy
 She sought the more to win the boy.

Toiling, rejoicing, sorrowing.

70. Exercises for the Vowel Sounds.

Exercise I.—Stand in front of a mirror. Shut the mouth, and then without any sound shape for each vowel in turn, so as to train the muscles of the lips, etc., to respond easily and quickly to the will.

Exercise II.—Use the little finger to get the right shape for *oo*, breathe in through the nose while keeping the finger in position, take finger away, sound *oo* for three seconds and still keep the position steady while breathing out for the next three seconds. The abdominal press must be used all the time the sound is made, the attack being made by the “in” movement, the carry-on by a continuation of the “in” movement, and the finish by the “out” or “release” movement. Repeat the exercise, using the other vowels in turn.

Exercise III.—Breathe in through the nose with the little finger placed in the *oo* position, remove finger and say slowly and firmly one of the following syllables, using each in turn, and breathing out after each: *oom, oon, ool, oor, oong, oop, oob, oof, oov, ooth, ooth* (voiced), *oos, ooz, oot, ood, oosh, ooze, ooch, ooj, ook, oog*, etc. Repeat the exercise, using the other vowels in turn.

Exercise IV.—Breathe in through the nose with the lips closed, and while facing a mirror sound the syllables *moo, noo*, etc., carefully shaping for *oo* and keeping the shape while prolonging the sound and while breathing out after the sound. Repeat the exercise, using the other vowels in turn.

Exercise V.—Breathe in through the nose with the lips closed in front of a mirror and sound words containing *oo*, such as : *noon, moon, cool, tool, smooth, soot, hoop, loop*, etc., etc. Sound words containing the other vowel sounds.

Exercise VI.—Breathe in through the nose with the little finger placed in the *oo* position.

(1) Sing a scale while keeping the finger so placed.

(2) Sing a scale, keeping the shape without the finger.

Repeat the exercise, using the other vowels in turn.

Exercise VII.—Breathe in through the nose and sing the following sounds on every semi-tone up the scale :

oo, oh, aw, ah, ay, ee,

and after singing each note place a consonant at the end of each vowel sound and speak as :

oop, ohp, awp, ahp, ayp, eep.

Exercise VIII.—Breathe in through the nose and sing each vowel sound in turn on each semi-tone up the scale, prolonging each sound for three seconds.

Exercise for Vowel Sounds.

Wherefore rejoice ? What conquest brings he home ?
 What tributaries follow him to Rome,
 To grace in captive bonds his chariot wheels ?
 You blocks, you stones, you worse than senseless things !
 O you hard hearts, you cruel men of Rome,
 Knew you not Pompey ? Many a time and oft
 Have you climbed up to walls and battlements,
 To towers and windows, yea, to chimney-tops,
 Your infants in your arms, and there have sat
 The livelong day, with patient expectation

To see great Pompey pass the streets of Rome :
And when you saw his chariot but appear,
Have you not made an universal shout,
That Tiber trembled underneath her banks
To hear the replication of your sounds
Made in her concave shores ?
And do you now put on your best attire,
And do you now cull out a holiday,
And do you now strew flowers in his way
That comes in triumph over Pompey's blood ?
Be gone !
Run to your houses, fall upon your knees,
Pray to the gods to intermit the plague
That needs must light on this ingratitude.
Go, go, good countrymen, and for this fault
Assemble all the poor men of your sort :
Draw them to Tiber banks and weep your tears
Into the channel, till the lowest stream
Do kiss the most exalted shores of all.

Exercise for Consonants.

Thou'rt not thyself.

For thou exist'st on many thousand grains
That issue out of dust ; happy thou art not
For what thou hast not, still thou striv'st to get,
And what thou hast forget'st ; thou art not certain
For thy complexion shifts to strange effects
After the moon.

For all the haft twinkled with diamond sparks,
Myriads of topaz-lights, and jacinth-work
Of subtlest jewellery.

When Ajax strives some rock's vast weight to throw.

CHAPTER VIII.

THE CONSONANTS.

71. Table of Consonant Sounds.

Labials.		Dentals.	Palatals.
Mouth stops.	m	n	η (= ng)
	{ p b	{ t d	{ k g
Mouth narrowed.	w	r l	j (= y)
	{ f v	θ δ (= th) {s z { \int (= sh) { ʒ (= zh) { t \int (= ch) { d ʒ (= j)	

72. Classification of the Consonants.—The above table shows that many different methods of classification may be adopted. The sounds made with the mouth open are called vowels; those with the mouth narrowed or stopped are called consonants. It is difficult to draw a definite line between the vowels and the consonants, two of the consonant sounds, *w* and *j* (= *y*), have already

been described with the vowels. They may be called semi-vowels; the same term may also be applied to *r* and *l* (usually styled liquids), the breath passing out in *r* between the raised tip of the tongue and the top of the upper gums, in *l* between the sides of the raised tongue and the side gums. The *M*, *N*, *NG* sounds are stopped in the mouth, but a free passage is left for them to escape through the nose; they should therefore be called nasal vowels. The easiest sounds to analyse are the explosives; they are produced by opening complete stops in the mouth, as *p* and *b* at the lips, *t* and *d* behind the upper teeth, and *k* and *g* at the back of the hard palate. These are named from their position, labials, dentals, and palatals. The stops may not be complete as in the case of *f* and *v* at the lips, *th*, *s* and *z*, *sh* and *zh* at the teeth; the sound may be continued through the narrowed space, hence the term continuants.

Several of the sounds are bracketed into pairs, which indicate that they are related to each other, one being the voiced sound of the other. This introduces the division of consonants into voiced (those that have some help from the larynx) and into unvoiced or breath consonants (those that depend solely upon the position of the articulatory apparatus). As far as speech is concerned this last is the most important classification, for there is some tone to be obtained from those sounds that are helped by the voice. It would seem therefore reasonable in this work to describe the voiced consonants before the breath, but for the sake of simplicity it will be better to take them in pairs, the voiced and the corresponding unvoiced sounds.

	Labials.	Dentals.	Palatals.
The voiced consonants are	<i>B, V</i>	<i>D, Th, Z, Zh</i>	<i>G</i>
The breath consonants are	<i>P, F</i>	<i>T, Th, S, Sh</i>	<i>K</i>

The first voiced and its corresponding breath consonants in each class are explosives—*B, P, D, T, G, K*; the remainder are fricatives or continuants.

73. Practice in Articulation.—The first lesson in articulation should be devoted to the practice of the differentiation of the voiced from the corresponding breath consonants. The voiced part of *B, V, D, Th, Z, Zh*, and *G* must be made in the larynx before the stops are opened; if continued afterwards another sound is introduced.

The second practice should be devoted to the accurate adjustment of the stop-positions by a mobile movement of the lips, tongue, soft palate, and lower jaw. Rigidity must be rigorously avoided. The contact of the lips with one another, or of the tongue with the palate, must be quite light, but firm enough to prevent any escape of air beyond the stop for the explosives. While narrowing for the continuants the articulatory apparatus must be kept mobile.

The third practice should be devoted to the control of the breath and the voice while sounding the consonants. The term explosive is suggestive of a forcible expulsion of imprisoned air when the barrier is suddenly removed. This is likely to be misleading. The stop must be very quickly moved by well lowering the jaw, but at the same time the breath must not be allowed to burst out, it must be controlled so that it flows out. The opening should be on or directly after the consonant in readiness for the following vowel. This rule applies to both classes of consonants, it makes no difference whether voice is present as in the voiced consonants, or voice is absent as in the breath consonants.

The control of the breath for the continuants removes

the prolonged hissing sounds so frequently heard in the teacher's voice.

A daily practice of the following exercises will create a clear, distinct, and accurate consonantal utterance:—

74. Articulatory Exercises.—*Exercise I.*—Whisper loudly the voiced sounds of all the voiced consonants each ten times:

B, V, D, Th, Z, Zh, G.

Exercise II.—Whisper loudly the sounds of all the breath consonants each ten times:

P, F, T, Th, S, Sh, K.

Exercise III.—Whisper loudly the above sounds quickly one after the other in the order given, first the voiced sounds in Exercise I., and then the unvoiced sounds in Exercise II.

Exercise IV.—Add the vowel sound *Ah* (*a:*) to each of the consonants. Be careful to open the mouth well and smartly after each consonant, and to control the breath.

(a) Repeat each sound ten times:

(b) Repeat sounds quickly one after the other in above order, with a distinct interval between each for a short but smooth inspiration.

75. The M Sound.—The *M* sound is so purely nasal and vocal that it may be called a nasal vowel. It can be prolonged to any extent and can be sung up and down the scale like a vowel sound. It is produced by the vibrating air (the voice) being focussed in the nose; its passage through the nose being unobstructed it answers to the definition of a vowel; it can be prolonged like other vowel sounds. The other nasal sounds are *N* and *NG*.

The position of the tongue is the same as for *Ah* (*a:*), that is the tip should be kept just behind the lower teeth,

and throughout its whole length it must be kept flat, so that no part of it is raised above the level of the lower teeth. The teeth should be nearly but not quite touching. The lips should be lightly but firmly closed, and the air in the mouth made to vibrate so far forward that if the lips are plucked the *M* sound is produced. The chin should be drawn down and in.

The *M* sound is quite the easiest sound to produce properly, because the lips being closed it is easy to place the sound well on to the front of the hard palate, and the beginner soon begins to feel the sensation of forward tone, which, once appreciated, becomes so useful for all other sounds.

It came with the merry May love
In the merry month of May.

Many a mickle makes a muckle.

Pale melancholy sat retired,
And in notes by distance made more sweet
Poured through the mellow horn her pensive soul.
Through glades and glooms the mingled measure stole,
And round a holy calm diffusing
Love of peace and lonely musing
In hollow murmurs died away.

The *M*, *N*, and *NG* sounds are seldom made sufficiently vocal, and their tone is sacrificed in speaking. Valuable use can be made of these sounds in voice-production; the *M* sound placed before a vowel sound will tend to draw that vowel sound forward, and will greatly assist in getting the full nasal reasonance.

Great care must be taken in making these nasal sounds that the voice is not allowed to be pushed through the nose uncontrolled, otherwise nasal twang will be produced instead of nasal resonance. The voice must be placed well forward in the nose. On the other hand it will be

found that any obstruction in the nose, such as a bad cold, which cuts off the nasal resonance, transforms *M* and *N* into *B* and *D*, and at the same time muffles every vowel sound.

Exercise I.—Sing the *M*, the *N*, and the *NG* sounds on each note of the scale.

Exercise II.—Sing the *M* sound, followed by each vowel sound in turn on each note of the scale.

76. The Non-voiced Labial P.—Similar position to *M* the lips should be lightly but firmly closed, holding the breath behind them; the tongue should be quite flat, its tip against the lower teeth; the teeth should be close together. To make the sound, open the mouth quickly and allow a smart emission of breath to escape.

The real difference between *P* and *B* and *M* is that in the two former the soft palate is higher and so prevents the passage of so much air through the nose. *P* is also unvoiced.

The painted pomp of pleasures proud parade.

The Voiced Labial B.—Exactly the same position of the organs as *P*, with vibration of the voice added. The breath is probably not so strongly held back by the closed lips in *B* as in *P*. The vibration slightly precedes and is present at the actual opening of the mouth, but must be discontinued directly the air passes through the opening, otherwise a vowel sound will be added.

Black bubbling brooks break brawling o'er their bounds.

77. The N Sound.—The *N* sound is nasal. The air is stopped from passing out of the mouth by the tongue being brought into contact with the whole of the hard

palate just behind the upper teeth; great care must be taken that the tongue is not made rigid when its tip is raised and that the back of the tongue is kept down. Just as in the *M* sound, it is necessary to get vibration in the mouth as well as in the nose. The lips should be parted, also the teeth, and both the lips and the jaw must be free from rigidity.

Never, never, never since I joined the human race.

78. The Non-voiced Dental T.—Similar position to *N*, with the same difference in the movement of the soft palate as mentioned under *P*. For *N*, *T*, *D* the whole of the front of the tongue should be made to touch the palate just behind the gum of the upper teeth all round so as to completely hold the breath behind the tongue. To make the sound, depress the tip of the tongue and open the mouth quickly, allowing a smart emission of breath.

A tell-tale tatling termagant that troubled all the town.

The Vocal Dental D.—Exactly the same position of the organs as *T*, with vibration of the voice added. What has been already stated with regard to the relationship between *P* and *B* applies to *T* and *D*.

The Duke paid the money due to the Jew before the dew was off the ground on Tuesday, and the Jew having duly acknowledged it said adieu to the Duke for ever.

79. The NG Sound.—The *NG* sound is nasal; the air, being stopped by the raising of the tongue and the lowering of the soft palate from passing out through the mouth, is directed into the nose. The tip of the tongue must rest just behind the lower teeth, and both the tongue and the soft palate must be quite free from rigidity; the air must

be focussed in the nose and not driven through it uncontrolled. The release of the palate gives the *G* sound of the *NG*. A very usual fault is to leave out the end sound as in the words *walkin'*, *ridin'*, *drivin'*, etc. The opposite fault of sounding the *G* too strongly gives the vulgarism *thinkink*, *drinkink*, etc. Stiffness of the soft palate causes both faults.

M, N, and NG Sounds.

Vital spark of heavenly flame,
Quit, oh ! quit this mortal frame ;
Trembling, hoping, lingering, flying,
Oh ! the pain, the bliss of dying !

80. The Non-voiced Guttural K.—Similar position to *NG*, except that in *K* and *G* the tongue is raised higher than in *NG*, and there is a corresponding less lowering of the soft palate ; this is quite a necessary arrangement, to allow of the breath being held back in the pharynx. To make the sound *K*, quickly separate the parts, allowing a simultaneous emission of controlled breath.

But Kate, the prettiest Kate in Christendom,
Kate of Kate Hall, my super-dainty Kate ;
For dainties are all Kates, and therefore, Kate,
Take this of me, Kate of my consolation.

The Voiced Guttural G.—The same as *K*, with vibration added as in the cases of *B* and *D*.

Gregory going gaily galloped gallantly to the gate.
I galloped, Dirck galloped, we galloped all three.

81. The Voiced Liquid R.—The tip of the tongue should be curved upwards, so that it comes into contact with the hard palate close to the upper front gums in the *N* position or a little further back. The sides of the tongue should touch the sides of the upper gums. The vibrating *R* is

only heard at the beginning of words ; at the end of words it has a smooth soft sound. There is another variety heard in English, as in the word *pretty* ; an *R* following a labial possesses so much labial quality that it may be styled a labial *R*. The German *R* is produced by the vibration of the uvula, it is made at the place of *NG*. To make the vibrating *R* it is necessary to make the tip of the tongue vibrate by allowing the vibrating breath to pass between it and the top of the upper gums. It is really either the right side of the tip or the left side of the tip that vibrates, not the centre.

Students who cannot satisfactorily make a vibrating *R* sound are advised to put the syllable *-er-* in front of each word beginning with an *R* in the following sentence. Keep the lips and the teeth apart.

Er-right er-round the er-rugged er-rock the er-ragged er-rascal
er-ran.

The smooth *R* is an aspirate and is chiefly important from its effect upon the preceding vowel, as exemplified in the words *oar* and *mercy*. It is a diminishing sound in standard English, and will probably in time disappear altogether. When a word ending in *R* is followed by a vowel, it becomes slightly more audible, and this causes confusion between words which do and words which do not end in *R*, giving rise to the ugly fault so noticeable in dramatic singing and speech of adding *R* to words ending in *A* : like *Ada*, *Ah*, *India*, when they stand alone or when they are followed by a word beginning with a vowel.

The Scotch people allow smooth *R* to affect the preceding vowel and to force it back, thus *p'u'rfect* becomes *p'ai'rfect*, and they make an exaggerated difference between *Ah* and *Ar*.

Exercise.—Make the following sounds ten times in succession, accenting well the first of each series of three :—

í t t, í t t, í t t, í.

ír t r t r, ír t r t r, ír t r t r, ír.

ír t r t r, ír t r t r, ír t r t r, írot.

ír t r t r, ír t r t r, ír t r t r, íram.
etc., etc.

82. The Voiced Liquid L.—The tip of the tongue should be lightly placed against the hard palate with its sides quite free; the nearer the upper gums the clearer the sound. To make the sound *L*, allow the vibrating breath to escape between the sides of the tongue and the side gums, keeping the lips and teeth apart; generally, however, one side or the other is allowed to vibrate, not both sides.

A library literally littered with literary literature.

83. The Aspirate H.—The *H* sound is merely an emission of breath, with no distinct shape of the organs of articulation; it is not used alone, but precedes one of the vowel sounds. Some people drop the sound altogether, others over-emphasise it.

Up a high hill he heaved a heavy huge hard stone.

84. The Non-voiced Dental F.—The middle of the lower lip should be made to touch lightly the edges of the top teeth. To make the sound *F*, allow the breath to escape in a continuous controlled stream between the lips and the teeth.

Five-fifths of the fifers are famed for their fun.

The Voiced Dental V.—Exactly the same position and same movement as *F*, with voice added as in the case of the explosives.

Five wives weave withes.

85. The Non-voiced Dental TH.—The tip of the tongue should be lightly placed between the upper and lower teeth. To make the sound *TH*, allow the breath to escape in a continuous controlled stream between the tongue and the top teeth.

A thatcher went forth to thatch a thatch.

The Voiced Dental TH.—The same position and movement, with vibration added.

And the smooth stream in smoother numbers flows.

The *TH* sound is often confused with the *F* sound.

Exercise.—Touch the tip of the finger with the tip of the tongue at each sound; make the sound ten times in succession, accenting well the first of each series of three.

(a) *th th th, th th th, th th th, th.*

(b) *ths ths ths, ths ths ths, ths ths ths, ths.*

(c) Alternate “*f*” “*th*” twenty times in the same manner.

86. The Non-voiced Dental S.—The tip of the tongue should be curled upwards so as to lightly touch the front part of the palate just behind the front upper teeth, the sides of the tongue should be touching the upper teeth at the sides and back of the upper jaw, a shallow channel should be formed along the middle of the tongue. The teeth should be nearly closed and the lips slightly apart. To make the

sound of *S*, allow the breath to escape in a continuous controlled stream along the shallow channel.

She sells sea shells on the sea-shore.

The Voiced Dental Z.—As *S*, with vibration added.

The frolic wind that breathes the spring,
Zephyr with Aurora playing.

87. The Non-voiced Dental SH.—The tip of the tongue should be made to lightly touch the hard palate at a point a little further back than for *S*, the body of the tongue should be raised higher than for *S*, so that the sides touch the upper gums at the side and back. The teeth should be slightly separated, and the lips protruded and well apart. To make the sound of *SH*, allow the breath to escape in a continuous controlled stream along the centre of the tongue. By adding a *T* sound *CH*, as in *change*, is produced.

Should such a shapely sash such shabby stitches show
A saddle-shaped surface.

The Voiced Dental ZH.—As *SH*, with vibration added. By adding a *D* sound *J*, as in *June*, is produced.

He wants both leisure and occasion.

88. The Lisp.—The lisp may be said to be one of the most usual faults of articulation; it is due to a faulty adjustment of the teeth and tongue; sometimes to faulty dentition. It is heard on all the *S* sounds, and also on the *TH*, *R*, and other sounds.

The following exercises are recommended:—

89. Lisp Exercises.—Join the teeth carefully with the fingers at the most natural position of the “bite.” Keep

the sides of the tongue from pressing out at each side, and in this position :—

(a) Whistle softly ten times in succession, accenting well the first of each series of three.

(b) Repeat the following sounds in the same manner, trying to keep up the same pressure of air as for the whistle :—

ś ś ś, ś ś ś, ś ś ś, ś.

ź ź ź, ź ź ź, ź ź ź, ź.

śh śh śh, śh śh śh, śh śh śh, śh.

źh źh źh, źh źh źh, źh źh źh, źh.

ćh ćh ćh, ćh ćh ćh, ćh ćh ćh, ćh.

ǰǰǰ, ǰǰǰ, ǰǰǰ, ǰ.

(c) Repeat the following sounds carefully, adjusting the teeth with the help of a looking-glass after each of the vowel sounds :—

oos, ohs, aws, ahs, ays, ees.

ooz, ohz, awz, ahz, ayz, eez.

oosh, ohsh, awsh, ahsh, aysh, eesh.

oozh, ohzh, awzh, ahzh, ayzh, eezh.

ooch, ohch, awch, ahch, aych, eech.

ooj, ohj, awj, ahj, ayj, eej.

90. Final Consonants.—As final consonants carry worst of all it is necessary that great care should be taken in the sounding of end letters and terminations.

The following lists of words should be carefully practised :—

Packs, Acts, Erst, Assists, Atheists, Posts,
Elevenths, Sabbath, Chaise, Success, Effervesce,

Likeness, Cliffs, Absolve, Irregularity, Wooingly,
Catalepsy, Oratory, Ineligibilities, Ecstatic, Shrill,
Obliged, Peculiarities, Cruel, Eulogism.

91. The "Wedge" Exercise.—Place the point of a wedge inwards between the teeth, after the consonant of every syllable except *she* in the following exercise:—

Sa ka she fa ra,
Ka ka she fa ra,
Ra ka she fa ra,
Da ka she fa ra,
Pa ka she fa ra,
Fa ka she fa ra.

CHAPTER IX.

THE ART OF SPEAKING AND READING.

92. Kind of Voices.—Different kinds of voices are used in speech. The ordinary conversational voice is often regarded as the natural voice; it is, however, seldom free from defects. A pleasant, musical, conversational voice is a most valuable asset; but however richly the speaker may be endowed by Nature, it is possible to improve the voice by bringing into prominence the good qualities and removing the defects. How many possessing pleasant conversational voices are able to preserve that pleasantness when using the more dramatic voice in teaching, lecturing, or acting, unless they have had some voice training! How many quite brilliant conversationalists find themselves ill at ease when addressing large audiences before they have learned the rudiments of public speaking! In order to be heard they shout in a high key. Voice-production teaches that the greater the need of audibility the longer must the vowel sounds be dwelt upon, and the more precise and accurate must be the articulations. The dramatic speaker dwells much longer upon his vowel sounds than does the mechanical speaker; elevated thoughts, graphic and pictorial illustrations, and passionate appeal are made clear and impressive by a

prolongation of the vowel sounds; the speaker by his deliberate style and by his command over his voice becomes more forcible.

93. Audibility.—The audibility or carrying power of the voice is improved by full vocality and precise articulation; this has been shown to be the main object of voice-production, and exercises for this purpose have been given in this book. Perfect pronunciation and articulation produce pure tone.

94. Phrasing.—In connected speech the sounds are no longer isolated, but have to be grouped according to the meaning of the passages into what may be termed breath groups; that is to say, with each expiration a certain number of sounds are made; this arrangement of sounds into breath groups is what is meant by phrasing in speech or song. Skilful phrasing is of the greatest importance and adds considerably to the clear understanding of connected speech; it depends largely upon a grasp of the grammatical structure of sentences. The proper value must be given to every sound, and the breath carefully sustained to the very end of each phrase, to ensure audibility and distinction.

95. The Meaning.—The meaning of a passage is affected by (1) the weight of the voice, which goes by the name of accent or stress when it is applied to syllables, of emphasis when applied to words or sentences; (2) the pitch of the voice; (3) the intensity of the voice, loudness or softness, in musical tones *forte* or *piano*; (4) the pace of utterance, quick or slow; (5) the inflection of the voice; (6) pauses; (7) modulation.

96. Modification of Sounds.—The English sounds that have been considered separately undergo modification

when combined together in the phrases of connected speech. The more conversational the style of the speech the greater the change that is observed. Those who try to preserve too carefully the due significance of such sound in ordinary conversation are said to be pedantic. The chief changes that take place are the assimilation of consonants, or the simplification of groups of consonants, and the substitution of weak for strong forms of unaccented words or syllables. These changes must not, however, interfere with the distinct pronunciation of a word or of any syllables in a word; there is no excuse for slurring even the unaccented syllables, each sound should be heard distinctly by the audience and not guessed by reference to the context.

97. Assimilation and Simplification.—Assimilation and simplification of consonants save trouble by reducing the number of articulatory movements. The tendency is especially marked in ordinary conversation; in such words as *phthisis* the *ph* is dropped; *d* and *a* are frequently omitted, as in *bread an(d) butter*; the *d* of *and* is usually dropped before a consonant and retained before a vowel; note also such words as *han(d)kerchief*, *We(d)nesday*, *this(t)le*, *Chris(t)mas*. It seems that when two similar sounds are placed together the common articulatory movement is made once only; this is very noticeable in compound words.

98. Accent.—When unaccented many words have a weakened sound, such as *the*, *a*, *an*, *of*, *to*, etc. This should be observed in speaking, but the unaccented words should never lose their articulatory form. The pronunciation of many words are changed when they become compound, such as *day* and *Sunday*, *mouth* and

Weymouth, ford and Oxford, land and island. Notice also a change of accent in the same word used either as a substantive or a verb: *accent*, but *to accent*; accentuation too changes the meaning of a word, as *August* (the month) and an *august* presence. The accented syllable gives the meaning to the word and should be sounded with greater force; it is difficult to give any fixed rules for accentuation, as all the rules that can be made seem to be broken to suit the ease of spoken sounds. There are two kinds of accents, primary and secondary; the primary generally falls upon the root of the word. In English there is a decided tendency to make the accent fall upon the earlier syllables, words of two or three syllables are generally accented on the first, words of four syllables on the first and third.

99. Emphasis.—Emphasis by accentuating a particular word in a sentence makes that word more prominent. It can be done in different ways by making a change in the intensity, the pace, or the pitch of the voice; or by introducing a pause before and after the emphatic word. Voice emphasis is much more important than stress. Over-emphasis and improper emphasis obscure the meaning of a sentence; the emphasis of an intelligent reader enables the audience to fully appreciate the sense of the author.

100. Pitch.—The voice is a musical instrument which can be made to express any kind of sentiment; there is a register of the speaking as well as of the singing voice; by practice every note can be made flexible, so that great variety can be introduced. A good reader, called upon suddenly to read an extract from a book that he does not fully comprehend, will make use of what is called “level speaking,”

he will sustain his voice to the end of each phrase, he will deliberately utter every sound in each phrase, he will avoid emphasis as much as possible, and will keep the pitch confined to the middle part of his voice. Provided the extract chosen is not too long this method will appear to be excellent, but the meaning is not made clear to the audience. As soon as the reader has grasped the meaning himself, he will alter his pitch to suit the varying sentiments, and will at the same time make the requisite changes in emphasis and phrasing, and thus will break up the monotony of level speaking.

The pitch of the speaking voice may be roughly represented by five notes; the middle note of the voice is the pitch used in ordinary salutations, as "Good morning," "How are you?" "Ladies and gentlemen," etc. This pitch should be used by the speaker when he does not wish to awaken any special sentiment in his audience. Raising the pitch may be said to elevate the spirits, lowering the pitch to depress the spirits. As the speaker works up his subject and becomes more earnest, he raises the pitch; but if he makes a somewhat unimportant statement, he lowers his pitch. These are the pitches nearest to the middle note, one just above which suggests excitement, and one just below usually used for parenthetical clauses. If the sentiment is very joyful a higher pitch still is used, and if very solemn or sad a still lower pitch. While it is excellent to begin a speech with the middle pitch, and to keep that pitch as the fundamental note running throughout the speech, it is necessary to change into one of the other four pitches as the changing sentiments demand. The brilliant conversationalist will accomplish this quite easily and naturally in ordinary talking, but if called upon to make use of the more dramatic speech of public speaking, he will

probably fail to make use of the right pitches, unless he has had definite tuition from a good teacher; he will probably make the fatal mistake of pitching his fundamental note too high, and as he proceeds will gradually work up the scale until he reaches the extreme range of his voice. His great effort engendered by his earnestness will cause him to fail in convincing his audience, and although it is quite evident that he has his subject very much at heart, he appears to suffer from a want of firmness and real sentiment. It is perhaps quite as common to hear a speaker suffering from the other extreme. A too low-pitched voice has a decidedly depressing effect upon an audience, and is monotonous.

101. Intensity.—A clear distinction must be drawn between intensity of feeling and intensity of the voice. In music the sign *f* (forte) is used to signify loudness, and the sign *p* (piano) to signify softness; *ff* means very loud, *pp* means very soft. The untutored speaker relies far too much upon *ff* for his effect; this is well exemplified by the London park orator, whose chief method of forcing his statements into the minds of his unfortunate audience is a loud declamation, accompanied with a jerky curtsey of the body or by spasmodic windmill actions of the arms. But what magical effects can be produced by a skilful *p* in speaking! In churches people sleep peacefully through the reiterated *ff* of the parson, a sudden *pp* awakens all the slumberers; *ff* is likely to ruin, *pp* to preserve voices. Under the synonym of “light and shade” many readers introduce a crescendo and diminuendo into each phrase; this is meaningless, highly objectionable, and very monotonous.

102. The Pace of Utterance.—One of the commonest faults in reading and speaking is a headlong rushing of the sounds into one another, resulting in a mere gabble,

especially if the sense happens to require a more rapid delivery than usual. Although the pace of utterance must necessarily vary according to the meaning, it must always be deliberate. It is quite possible to be slow without appearing to be slow by making the deliberate speech full of animation. The more deliberate the utterance the more powerful the speaker; it is possible to hurry without being hurried, and to hasten without being careless. A man who can control his temper, and utters his words deliberately and distinctly in spite of his angry passions, will assuredly get the better of the man who gives a free rein to his feeling and with many hideous grimaces emits a volley of indistinct noises, pace alone preventing them from being intelligible. Distinctness in rapid speech is dependent upon a flexibility of the voice and articulation that can only be acquired by assiduous practice.

103. Pause.—In speaking use must be made of what is called the rhetorical pause as distinct from the grammatical pause. Sir Henry Irving made such intelligent use of his rhetorical pauses that it has been said of him that “he was eloquent in his pauses.” How remiss our public speakers are in recognising the importance of the pause! A pause before and after the emphatic word makes that word stand out more prominently than does a heavy blow upon the reading desk. A pause is usually made before and after a parenthesis. A pause, while a full respiration is taken, after a speaker has taken up his position, adds great dignity to the beginning of his address. Pauses, however, cannot be said to be eloquent unless they are preceded by proper inflections.

104. Inflection.—Inflection is too often confounded with pitch, but it, like intensity, has a separate existence.

Inflection is the gliding of the voice either upwards above the note or downwards below the note, or by a combined movement of the one followed by the other. The speaker does not actually keep on one note, he is continually gliding up and down the speaking register. Make the sound *oh* (o:), and starting from the middle note of the voice glide upwards *óh*, then glide downwards *òh*, next glide upwards and then downwards *óh*, and finally glide downwards and then upwards *õh*. These glides or inflections give quite a different meaning to the *oh*; but it requires careful practice to be able to make a glide without loss of tone. Notice the glides in the following question (an inflection upwards followed by an inflection downwards). Is it a glide or inflection? Inflections so materially alter the meaning of a sentence that definite rules have been formulated for guidance in their use. The upward glide expresses incompleteness, negation, indecision or suspense, it is also used in questions which expect the answer yes or no, and in appeals, prayers, etc. The downward glide expresses completeness, affirmation, decision, and is used in questions which contain the answer, and in commands, etc.

Antithesis is marked by an upward glide on the one word and a downward glide on its antagonist. A compound glide, called a circumflex inflection, is used when the meaning is different from the words used, as in irony and sarcasm.

105. Rhythm.—The over-accentuated rhythm of the schoolboy recitation, in which the up-beats and down-beats are so markedly differentiated, and the reading of poetry as if it were prose, in which the rhythmical accent is neglected altogether, are the two extremes to be avoided. Unless full value is given to the carefully chosen words of the

poet, and unless the stress of the voice is allowed to fall in the right place, the beauty of the poetry is altogether lost. A reader of poetry or blank verse should possess a good sense of rhythm. There is even a rhythmical wave to be observed in some of the works of good prose writers.

106. Modulation.—Modulation consists of a blending of all the qualities necessary for effective speech; it enables the speaker to give the proper intonation to each of his sentiments, by a careful use of the pause, emphasis, inflections, pitch, pace, and intensity, without interfering with his own individuality. Individuality is one of the greatest charms of a good speaker, and should on no account be destroyed by any artificial methods. The modulation of the voice conveys the expression of the thought, “the sound must seem an echo to the sense”; the intonation of the voice must change to suit every modification of the sense.

The words chosen; the tone of the voice; the modulation of that tone by pitch, intensity, pace, pause, emphasis, and particularly by inflection; the attitude; the facial expression; and the gestures must all be in harmony with the sentiment. This makes the speaker appear to be in real earnest, because sentiment and not sentimentality is being conveyed by the voice.

107. Hints to Lecturers.—A lesson or lecture consists of a series of thoughts, each thought must be clothed in appropriate language, voice, and gesture; the series should be arranged in good order. The teacher must feel the sentiment himself, and must use the proper methods to impart it; the scholars responding by their interest and attention give back to the teacher fresh inspiration. A sentiment inappropriately clothed is suggestive of insincerity and fails in its object.

Do not lose command of the voice, or mistake emotionalism for sentiment in endeavouring to make the voice and action respond to the feeling.

Do not over-emphasise or use too many or too large inflections, but be animated while the words of each phrase flow out deliberately.

Do not attempt to strain the voice even if the audience is very large, do not gasp, but regulate the breath and the volume of the voice, and discriminate between the main and the side arguments.

Do not waste too much time over the introduction, get to work quickly after firmly stating the object, build up the subject with good arguments, using the weakest first and the strongest last; appeal in the most direct way to the audience; select suitable sentiments, clothe them with simple and effective language; be firm in attitude and gesture.



108. Classified Lists of Vowel and Consonant Sounds.

	M	P	B	N	T	D	K	G
EE Ay Ah Aw Oh Oo	Me May Mast Maul Moan Moon	Pea Pay Past Paul Pole Pool	Bee Bay Bask Bawl Bowl Boom	Need Nay Nasty Naught No Noon	Tea Tail Task Tall Toe Tool	Deed Day Dance Dawn Doe Doom	Key Kate Cask Cause Coal Cool	Geese Gay Gasp Gall Go Goose
i e a o u oo	Mid Met Mat Mop Musk Cook	Pit Pet Pat Pot Put(ty) Put	Bit Bet Bat Bob But Book	Knit Net Gnat Not Nut Nook	Tit Ten Tap Tom Tub Took	Did Dead Dad Don Dumb	Kill Keg Cat Cob Cub Could	Gig Get Gap Gong Gun Good
er U I Ow Oy	Mirth Muse My Mouth Moist	Purse Puce Pie Pound Poise	Bird Beauty By Bough Boy	Nerve Nude Night Now Noise	Turn Tune Tie Town Toy	Dirt Dude Die Down Doit	Curt Kew Kite Cow Coy	Girl Gules Guy Gown Goitre

	R	L	H	F	V	TH	S	SH	W	Y
EE Ay Ah Aw Oh Oo	Reef Ray Rasp Raw Row Room	Lea Lay Last Law Load Loop	He Hay Hasp Haul Home Hoot	Fee Face Fast Fall Foe Food	Veal Vale Vast Vault Vote Zoo	Thee Thane Thought Though Tooth	Sea Say Saw So Soon	She Shade Shaft Shawl Show Shoe	Weed Wade Wall Woe Woo	Ye Yea Yarn Yawn Yolk You
i e a o u oo	Rim Rent Rat Rock Rug Rook	Lit Let Lap Long Lung Look	Hit Head Had Hop Hung Hook	Fit Fen Fat Fog Fun Foot	Vim Vent Vamp Volley Vulgar	This Then Than Thong Thus	Sit Set Sat Sod Sung Soot	Shin Shed Shag Shot Shut Should	Win Wen Wag Wot Won Wood	Yiddish Yet Yap Yon Young
er U I Ow Oy	Rude Right Round Roy	Learn Lucy Light Loud Loin	Her Hue High How Ahoy	Fertile Few Fight Found Foist	Verb View Vie Vow Void	Thirty Thule Thigh Thou	Sir Sue Sigh Sow Soil	Shirt Shy Shower	Wide Wound	Yearn Youth Jowl
	e: Ju: ai a:u: o:i									

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