

AN
INAUGURAL DISSERTATION

ON

*The Function of Voice
and Speech*

SUBMITTED TO THE

PRESIDENT, BOARD OF TRUSTEES, AND MEDICAL FACULTY

OF THE

University of Nashville,

FOR THE DEGREE OF

DOCTOR OF MEDICINE.

BY

John H. Gill

OF

Tennessee

1856

W. T. BERRY & CO.,
BOOKSELLERS AND STATIONERS,
NASHVILLE, TENN.

Know all men by these presents
that among the severe trials in-
cident to human life^{is} that of a
person who is obliged to write
because he cannot be excused,
when every nerve, and muscle, is
ready to rise in mutiny at the
thought, and the body, soul,
and spirit, rebel at the very idea
of the undertaking.

The product of the pen in such
a case, is more likely to be the
heavy after piece of a jaded
spirit than the very speaking
of the soul.

But at the last extremity, a few
remarks must be made, at all
hazard, and there is one that
will be sure to interest the reader

more than any other, and that is this— the number shall be small. In speaking of the function of the voice, it will be expected of the writer, as a matter of course, that he will mention the organs compassing the apparatus by which the function is executed. The vocal apparatus is with little difference, the same as that by which the work of respiration is performed.

The chest, the lungs, the trachea, and the larynx, are the organs concerned,

The words voice and speech are frequently used as synonyms; but in a philosophical discussion, when speaking of their origin,

it is natural to make a distinction;
for voice is the article out of which
speech is manufactured.

This object, ^{is} accomplished by the
combined operations of various
organs, in addition to those spe-
cified as belonging to the vocal
apparatus, ^{the organs are, the tongue,} "the lips, the teeth,
the palate, and the nasal passage.

That the apparatus of respiration,
while operating in the execution
of its appropriate function,
should, as an incidental matter,
without embarrassment, and with
so little assistance from other
organs, execute an other func-
tion, so important as that of
voice, is a striking instance of that
economy which nature often

exercises in her operative labor,
and the materials employed.

The respired air, in passing out
from the lungs, excites such an
action in the larynx, as to produce
that sound which we call the natu-
ral voice of animals, and which,
in man, is so modulated by other
organs as to produce Speech, in
such a variety of modifications,
as to express our thoughts and
feelings in such a manner as
to make it the best external
exponent of internal operations.

The function of speech, in its
wonderful operations, when gui-
ced by sentiment, and attuned
by sensibility and sympathy,
has a compass equal to the

5

Whole circle of human feeling,
with all the variation of circum-
-stance and condition,

It has the capacity of particular
adaptation to our hopes and
fears, joys, and sorrows, the
passions and emotions of our
nature, and that in all the
various degrees recognized in
the scale of human feelings.

Over the whole inner man it th-
-us exerts no small degree of
power, in exciting or allaying
in joy or woe, for good or for evil.

It is a consideration of no small
interest, that the voice so evidently
organized with the special view
of being operated upon by the
power of speech.

6

The fact is evident from the law of mind and feeling, and from the structure of all our susceptibilities. They all give a different response, and vary in their character, and degree of action, according to the vocal influence which is brought to bear upon them. Every vibration, and note of sympathy and sensibility, is ever ready to give a response which demonstrates and demonstrates the fact, that we were formed with the particular view of being highly susceptible to the action of vocal power. Who that has ever seen afflictions, who that has ever been visited by

7
misfortune and distress! cannot
attest the power of speech, to
strengthen or debilitate, to en-
liven or depress, according to
its chaacter, while it thrilled
like electricity through every nerve.
All the higher qualities of our
intellectual and moral nature,
reason, understanding, benevolence,
and nobleness of soul, are greatly
dependent on the vocal power
as a special medium by wh
ich to make this ours full and
spontaneous response, in all
the interviews of man with
his species.

They are the conductors of men-
tal and moral electro-magnetism,
by which mind communicates

8

with mind, heart with heart,
soul with soul, sensibility with
sensibility, sympathy with
sympathy— in short, the med-
ium through which, by a conc-
-entration, and embodiment
of intellectual and moral en-
ergy, a man transfuses all the
feelings of his bosom into that
of an other, with the speed,
and fire, and force, of elec-
tricity. And hence it follows,
especially, in the use of oral
language, that the reception
we give to the communication
of an other, and its force,
and effect, are always mod-
ified by the character of the
speaker, and the opinion

we have formed of him,
 The same words, delivered in the
 same style, cannot possibly
 have the same effect when
 coming from men of different
 and opposite characters.

From the one, our feelings mi-
 ght recoil with disgust, while we
 would listen eagerly to the other,
 as did the lady of the case to
 catch the sound of his father's
 voice—

“With head upward and look intent,
 And eye and ear attentive bent,
 With welcome smile and lips apart,
 Like monument of Grecian art.”

In this view of the subject, it is
 interesting to know, that the
 organs of speech, like those of

Loco-motion, are susceptible of a high degree of cultivation and improvement.

This is evident from the striking distinctions and contrasts, in this respect, which exist among mankind in whose organization there is no structural defect.

The fact that a function, so highly vital and important as that of respiration, is most intimately concerned in all the strictly philosophical improvements of the function of speech, would seem to indicate the propriety of noticing, especially, some of the more practical considerations in favor of such

improvement.

The most important exercises,
for the improvement of the voice,
are highly favourable to the
health of the lungs,

This is true with respect to various
pathological conditions of the
lungs, both as to the means
of prevention, and of cure.

The lungs are frequently in an
enfeebled condition, with an ob-
structed and languid circula-
-tion, with a loss of tone, and
a bad state of the secretions,
which affect their whole subst-
-ance. But this unhealthy
condition, more particularly,
affects the air cells and air
passages, where the vitiated

12
Secretions accumulate; and not
being of the proper consistence,
but, frequently, tough and
tenacious, they adhere, and
clog up the cells and passages,
prevent the free ingress and
egress of air, and ~~frequently~~
produce a tendency to collapse,
and greatly lessen the capaci-
ty of the lungs, for the exec-
ution of this important
function. But such a pa-
thological condition is eviden-
tly inconsistent with the
practical results of vocal
philosophy; for, its natural
tendency is to prevent
such a condition, or to rem-
ove it where it exists.

It tends directly to remove and prevent engorgements; to make the lungs clear themselves of accumulations, by improving this circulation and secretions; this action, this energy, and this tone, with an increase of this capacity.

Again—The most important measures adopted for the improvement of the voice are highly important for the general health. Vocal philosophy is not only a subject of great practical utility, as it respects the function of speech, but also as it respects all the vital functions; and, in fact, every organ, and every function, in

the human economy. They are
 all dependant on respiration,
 which is indispensible to the
 function of speech. Accord-
 -ing as respiration is well or
 ill performed, we are more
 or less susceptible of impression
 by the various morbific agents
 which tend to disturb a healthy
 action, and establish disease; for
 our protection is the resistance
 offered by the vital forces, and
 this resistance diminishes, as
 the function of respiration is
 improved. This is the function
 by which the formation of the
 blood is completed, and by
 which it is renewed, after bei-
 ing drained of its nutritive

and vivifying properties, by making its circulation through the system, and "administering to the various operations of life."

No one will doubt the importance of good blood, to the health of the whole economy, and every part of it; but it is evident to a demonstration, that the blood is better or worse, according as respiration is more or less perfect. And the perfection of this function, as of every other, depends on the organs concerned, and, especially, on the condition of the lungs, and those organs in which resides the motive power, which is brought into requisition in the

respiratory operations of the Chest.
 This power, by which the vocal
 and respiratory apparatus,
 and all the organs of speech
 are controlled, is a muscular
 power, a power which resides
 in certain muscles which
 act in obedience to the will,
 and which by proper discip-
 line are greatly improved.
 But although the apparatus
 of respiration, for certain
 purposes, is under the con-
 trol of the will, and may
 be controlled by it, at pleas-
 ure, yet, the ordinary execution
 of the functions of respiration,
 both when we are awake, and when
 we are asleep, is not to be attrib-

ued to the Stimulus of volition;
 but to a spontaneous impulse
 to action resulting from the Stim-
 ulus of Simple irritation in which
 the will is not consulted. The
 muscular fibres are excited in
 to action in the work of respira-
 tion by the Stimulus of the air
 we breathe, acting upon the
 lungs; as the stomach is excit-
 ed to the work of digestion by
 the Stimulus of food; and as
 the heart and blood vessels
 are excited to action by the
 Stimulus of blood; and as
 the bowels are excited to this
 peristaltic action by the prop-
 erties of their contents.

As the will is a faculty of the

mind, and the mind is frequ-
 ently besotted, and neither
 knows nor feels any stimulus
 but that of ~~liquor~~ ^{liquor}, it would
 have been fatal to the health,
 and happiness, and life, of
 man if the vital organs and
 function had been made to
 wait upon the Tardy Stimu-
 lus of Volition. Man is frequ-
 ently too stupid to will his
 own happiness; but the au-
 thor of our being, in the
 exercise of infinite wisdom
 and goodness, has ^{so} ordered it,
 that every organ is provided
 with its own appropriate
 stimulus, which is adapted
 to its peculiar organization,

19
The eye is excited by the stimulus of light; the ear by that of sound, and all the organs which constitute the sense of smell by the genial stimulus of odors.

But the writer is reminded of his promise in the outset, that his remarks should be few, and, although, he is aware that the various pathological conditions to which the organs of voice are frequently subject, would furnish a large amount of interesting matter for discussion, yet he will dismiss this subject without further notice, and would

merely suggest a few con-
 siderations, which, it seems
 to him, have been too freq-
 uently overlooked. These are
 certain positions which con-
 stitute the basis of Theory and
 practice in vocal philosophy,
 and which, though they may
 appear self-evident, will be
 found worthy of special no-
 tice.

1 It is evident that the organs
 must assume a great variety
 of positions in executing the
 function of speech.

2 In executing this function,
 the organs must have a
 sufficient length of time
 allowed them to assume the

different positions necessary.

3. The organs must be allowed to occupy the different positions assumed, a sufficient length of time.

4. The organs must have a sufficient force applied to them, in the different positions.

5. The available force depends, primarily, on the power of those muscles which are concerned in working the apparatus of respiration, and of voice.

6. He must know when to apply the force exerted in executing the function of speech. He must know

in what part of the mechanism
is no concern'd, the force is
more especially requir'd. —