exhalation of our air stream, must be firm but never forced. Our ears are the best guides in determining exactly how much breath impulse we need to make a smooth transition from one note to the next when slurring. As a general rule we will need more air for the lower notes, and more air *velocity* for the higher tones. The degree of velocity with which our breath strikes the vibrating lips will be determined by the coordinated action of the diaphragm muscles and the arched tongue. Whether slurring to a higher tone or to a lower one, we must always maintain the buoyant sensation of diaphragmatic support.

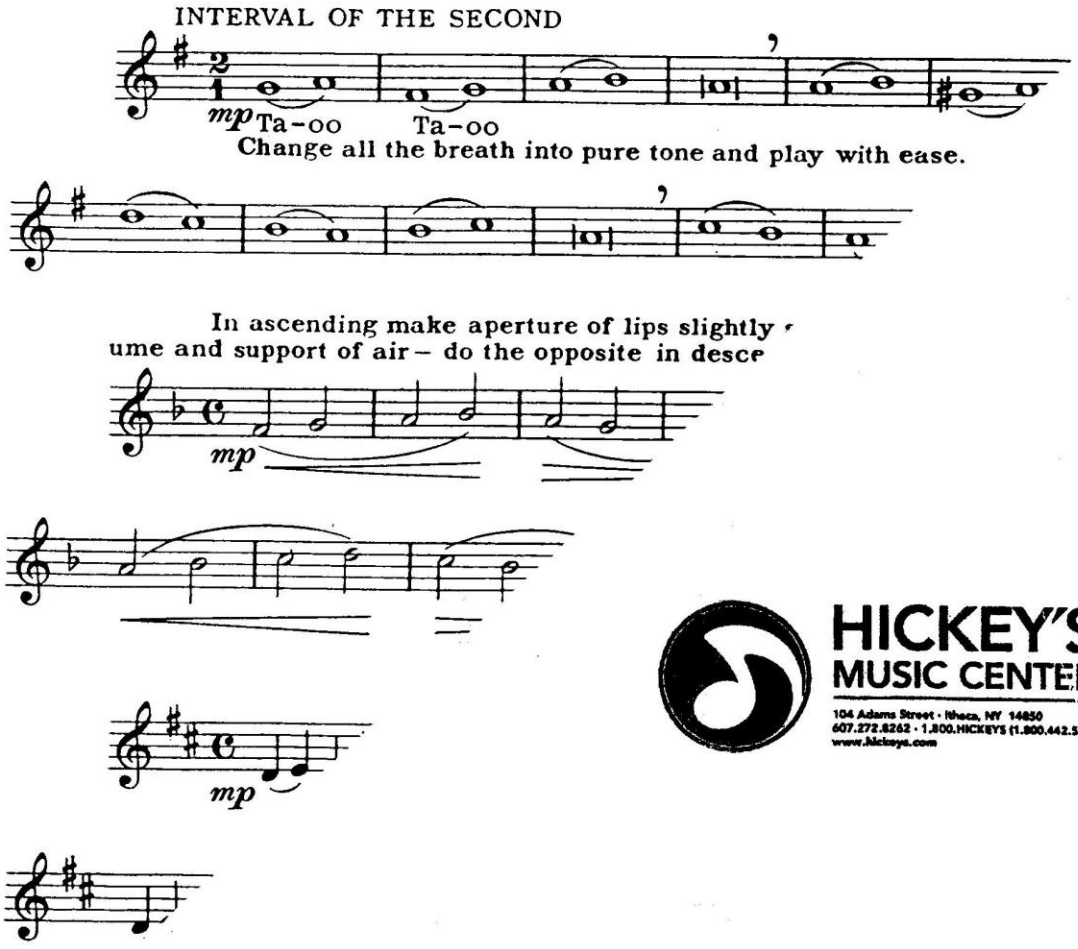
In slurring, the movement of the valves is secondary, and should not be relied upon to change the pitch. We must allow the breath to make the change in pitch. The valves only *assist* us in making the pitch change. Of course, the movement of the valves must be synchronized with the breath syllables in order to achieve a fluid slur from one note to the other.

Breath control is an acquired skill that can mature only through time and dedicated practice. The manner in which we project our breath determines the quality of our sound. But we must remember that the breathing requirements for brass instrument playing are considerably more demanding than the requirements of normal respiration. Our breath is not self-automated. *We* must do the work. By cultivating breath control we can make our horns speak with authority; our playing will assume new confidence and control.

Excerpt from ERNEST WILLIAMS COMPLETE METHOD

Chapter 9

SLURS



Chapter Two
THE FUNCTIONS OF THE TONGUE

THE BREATH RELEASE

Let me begin this chapter by debunking any theory that claims that the articulated note is activated by the tongue. "Tonguing" is a misnomer; the proper term is breath release.

The tongue acts only as a muscular vehicle that guides and releases our air column. We use the center-most tip of our tongue as a regulatory valve that alternately resists and releases our pressurized breath. By enabling us to hermetically seal the air stream the tip of our tongue assists us in compressing our breath for an aggressive exhalation.

When we ready ourselves for the breath release, or attack, the pressure of the air column against the tongue valve (tip) activates the body's entire muscular structure. Our body is "cocked" for action; all of our facial muscles are drawn together to supply instantaneous support. Even the muscles throughout our legs and torso are sympathetically flexed for support. Our mouthpiece is steadied on our lips by the natural focus of our embouchure muscles, and we are ready for the commencement of the note. The tongue tip works in sympathy with all of our body muscles that are drawn into play to support our breath.

The notion that our tongue "strikes" and the air follows after the articulation is sheer nonsense. This can only produce a delayed attack, which if described verbally would sound like this: "tuh – whoosh." When our air column is properly supported and is sealed behind the tongue, the movement of ou tongue tip and the breath release will be inseparactions. We will have no delay between the atta the commencement of sound.

"Striking" the notes with our tong correctly *releasing* our pressurized trous consequences. In this del the breath does not rush thro dence with the articulatior attack. Consequently, th built up to propel our of the instrument. ner are doomed *through* it. As

I cannot emphasize enough how crucial it is to have the breath compressed in readiness against the sealed valve (tongue tip) *before* the release. The valve and the air must move simultaneously. An enormous amount of wind velocity is required to drive our air column through the horn. We cannot obtain that degree of velocity by tonguing and *then* blowing. Our breath must blow that tongue valve down, so that the air stream can shoot forward like gangbusters.

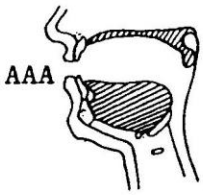
The tip of our tongue, acting as a spring-like valve, enables us to pack energy into the air stream so th our breath can be propelled through the horn. not delude ourselves into thinking that our actually starts the sound, because it is the b accomplishes that, by striking the lips them in vibratory motion.

By using the tongue as a valve projected with the necessary the resistances of our body are two simple reasons stream has been for just prior to relea of our body's r the resistanc blow thro late by *then* re

Excerpts of Text from

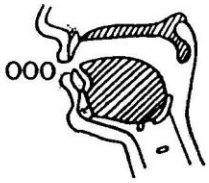
ERNEST S. WILLIAMS (Complete Method)

"TAA"



LOW
REGISTER

"TOO"



MIDDLE
REGISTER

"TEE"

HIGH
REGISTER

"TEE"

EXTREME HIGH
REGISTER

TECHNIQUES IN BREATH CONTROL

Place finger on the thyroid cartilage (ADAM'S APPLE) and sing Study A, using syllable ta-e. Observe movements of cartilage and the tongue from its base to its center. Then play Study A, using syllable ta-e making certain that the movement of the cartilage and tongue function effectively. It will be observed that the larynx and the tongue rise and lower according to the pitch.

DISTANCE IN MOVEMENT OF THE TONGUE

It is obvious that the cartilage and tongue move a greater distance in executing the interval of a fourth than of a third, and so on — the larger the interval, the greater the change.

TECHNIQUE FOR SCALE, CHORD AND INTERVAL

This principle should be properly cultivated and an accurate technique attained in scale, chord and interval practice.

By properly applying this precept, the student, b patient and careful practice, should acquire techn accuracy, flexibility and fluency. All tones shou "FULL, PURE, FREE and in TUNE."

With this knowledge, through experiment tice, a dependable technique should be dev

CHANGE OF LIP POSITION UNN

It is unnecessary to change lips slurring intervals without a char when a change of fingering is should be accompanied by ar the larynx and the base of t the movement in he throat fourths than in slurring t is necessary in slurrir Relative changes r ployed in scale, should be prod

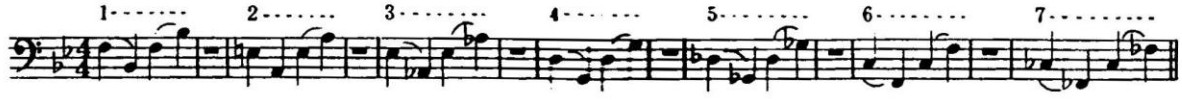
CC

Ar pitch de

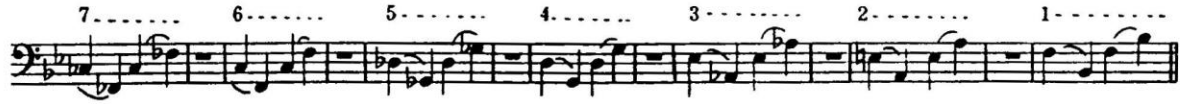
Lip Flexibilities Vol. 2

Trombone or Baritone

Descending from first position

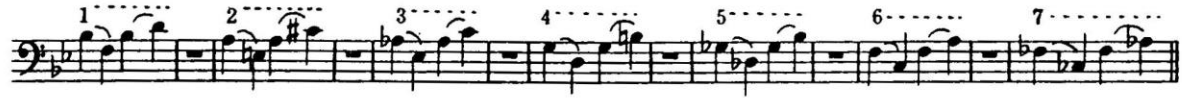


ascending from seventh position



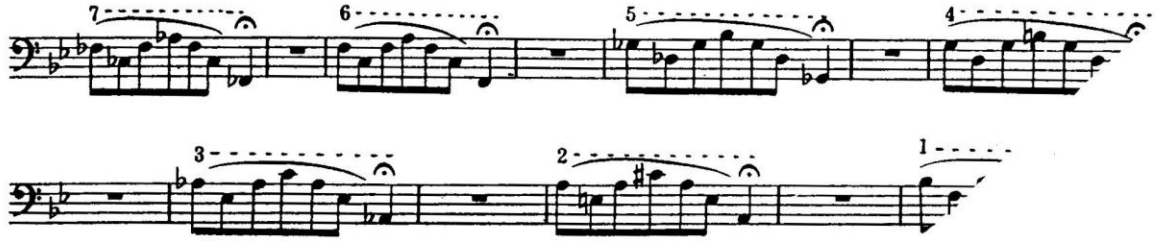
RANGE TO D

Descending from first position



EXPANDING RANGE TO D

ascending from seventh position



LIP TRILLING TO D

Descending from first posi

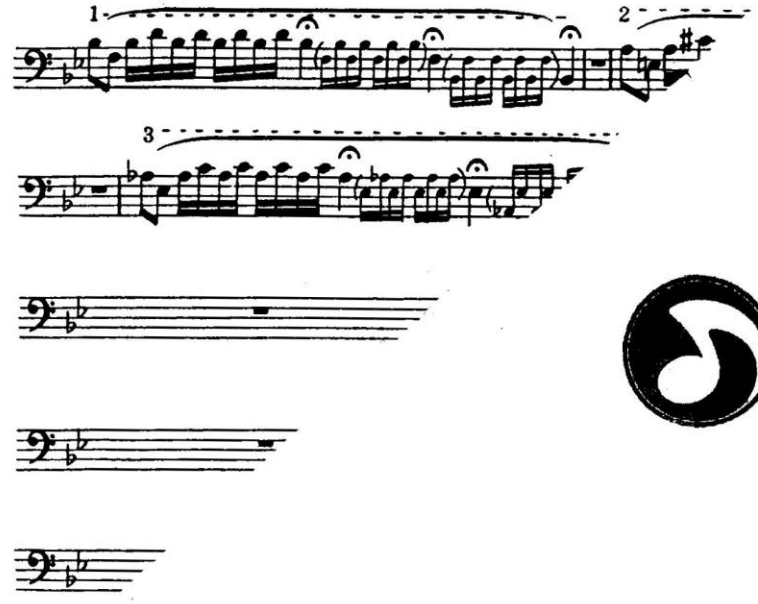


Fig. 1 FRONT VIEW OF CONTRIBUTORY FACIAL MUSCLES

Chapter Six
QUESTIONS AND ANSWERS

Question: Why is the word "tonguing" a misnomer?

Answer: The tongue does not start our tone, as implied by the phrase "tonguing." Rather, the lips are forced into vibrating motion by the aggressive assault of our breath, and these vibrations commence the sound. This is an important mental concept, since it is not the tongue that is the active agent, but the compressed breath, which forces the spring-like valve down slightly (the tongue tip) for the explosive release. Hence, the proper term is not "tonguing" but "breath release."

Question: Is there more than one way to release our air column?

Answer: Yes, there are two ways to release the air stream.

First method: The breath can be released by breaking the hermetic seal formed by the placement of the tongue tip at the roof of our mouth where our front teeth meet the gum line. In this type of articulation the tip of our tongue acts as a spring-like valve. When our tongue tip is retracted slightly from its position at the gum line, our compressed breath – which has been forced up against the tongue tip – is immediately released and charges forward triggering the vibrations of our lips.

Second method: Our tongue tip is not used to contain the compressed air column. The latter is activated by an impulse from the diaphragm muscles while forming any one of several breath syllables: hoo, haa, or hee. This second method is not nearly as spontaneous an articulation as the technique in which our tongue tip serves as a valve.

Question: Does the breath release without the use of the tongue tip have a practical application for performance?

Answer: The "hee-hoo-haa" type of breath rel
not suggested for actual performance. But i
lent practice for the synchronization of
tributory muscles supporting our breat
for the development of responsive li
type of clinical exercise need not
sively. A few minutes a day,
articulation in a relaxed man

Overdoing this form of our patterns of muscular response, since the most important technique of brass playing is the spontaneous breath release coupled with the spring-like action of our tongue tip.

Question: What are the three sections of our tongue and what are their corresponding functions?

Answer:

1) The rear section must be arched in order to compress the air stream into the necessary breath syllables.

2) The middle section of our tongue must be spread out against our upper rear molars. This serves to determine the relative position of our jaw, thereby creating the necessary opening between our upper and lower sets of teeth for the passage of our breath.

3) The tip of our tongue operates as a spring-lik
valve, which alternately stops and releases our bre
Our tongue tip must be positioned at the roof
mouth where our front teeth meet the gum
tongue tip flips down in a rapid spring-lik
the breath release, and then springs ba
position in preparation for the
While the note is being sustained
cised that our tongue tip never

The functions of our ton
are distinct, and one sho
The slight movement of
alter the fixed positio

Question: Wh

Answer
shou
an