Double Tonguing
A Primer for beginners and experts...
The basics...

- What exactly is double tonguing?
The basics...

- Maybe...
The basics...
Beethoven 4, here I come...
The basics

- Double tonguing is a technique for rapid articulation
- The technique involves blocking reed vibration by alternating tongue stops with air flow stops
- The same principles that support a good single tongue apply to a successful double tongue
Your tongue

The human tongue

- papillae
- roof of mouth
- tongue
- base
- food and air passage
- lower jawbone
- teeth
- lips
- root
What is ‘legato’ single tonguing?

- Always based on the ‘long tone’
- Tongue touches reed quickly without stopping airflow
- Tootootootoo/Doodoodoodoo
- Tehtehtehetheh/Dehdehdehdeh
- Tuhtuhtuhtuhtuh/Duhduhduhduh
- Tihtihtihtihtihtih/Dihdihdihdih
“Duh” or “Tuh”? 

• In human speech, “Duh” and “Guh” are voiced syllables. The vocal cords vibrate at the beginning of these syllables.

• When we say “Tuh” and “Kuh” there is a brief delay in the vocal cords. The tongue motion is very similar.

• Many players like the idea of “Duh” and “Guh” because it allows you to imitate constant vibrating vocal cords with your vibrating reed.

• On the other hand, “Tuh” and “Kuh” are slightly more accurate representations of how we play.

• They are equally useful concepts and can be combined.
Bassoon single tongue staccato has two types...

- ‘Winded’ staccato [“on the wind”] - articulation begins with tongue start and ends with reduction of air flow - “Tuh”

- ‘Stopped’ staccato - articulation begins AND ENDS with the tongue while maintaining constant air flow - “Tut”

- *A third option - breath attacks - are incredibly useful, but we’ll leave them out of this presentation for now*
When do we use ‘winded’ staccato?

- Whenever we want to finish a note while maintaining the impression of resonance from both the instrument and within the room

- Much of the staccato we use is of this type

- It is typically more graceful and allows for elegance in musical style.

- We rarely finish a long tone with a tongue stop; the same principle typically applies to shorter notes as well

- But it becomes increasingly difficult to execute a faster winded staccato passage as tempo increases
When do we use tongue stopped staccato?

- When we require an abrupt end to a note
- When a passage requires a high degree of separation and very dry articulation
- When a passage becomes too quick to use ‘winded staccato’
Is tongue stopped staccato unmusical?

- Absolutely not. It is an essential part of our sound production and articulation.

- We use a LOT of stopped tonguing in the orchestral repertoire, especially when a short note is followed by another short note. When a series of stopped staccato notes are followed by a rest of any length, we more often finish “on the wind”

- Good stopped tonguing depends on constant air support
How is a legato tongue related to a stopped tongue staccato?

- They are actually the same process!
- Everything depends on the DURATION of tongue contact to reed
- Short duration of contact = staccato, long duration of contact = legato
- I’ll demonstrate this by gradually morphing long tones into shorter notes by holding the tongue to the reed and still keep my blowing pressure...
Why is it important to understand the relationship between legato tongue and stopped tongue?

- Because a good double tongue is only possible when we learn to control articulation with CONSTANT AIR FLOW, best developed with legato tongue.
The mechanics of double tonguing.

- Air flow MUST BE CONSTANT
- Articulation alternates between ‘tongue touching reed’ and ‘tongue arching to the roof of the mouth to stop air flow’
- Rather than thinking FRONT and BACK... think TIP and TOP.
Why is it so difficult to achieve a rhythmically even alternation between the tip and top articulations?

- It’s physics!!!

- The contact of the tip of the tongue to the tip of the reed creates an immediate cessation of vibration

- However, the contact of the top of the tongue to the roof of the mouth inhibits air flow in a less precise manner

- The release of the tip of the tongue from the tip of the reed allows existing air pressure pressure to immediately enter the reed and restart vibration efficiently

- The release of the top of the tongue from the roof of the mouth allows air to flow back to the space in the front of the mouth. It takes a moment to build up sufficient pressure - this is not an immediate process
So...while the *tip* articulation is quick and clean..
...the *top* articulation is soft and a bit mushy..
Can a bassoonist ever achieve a precise and exact balance between the tip and the top tongue?

- It’s a significant challenge!
- By focusing on air flow you can come close...
First steps to an efficient double tongue...

- All exercises should be designed to encourage precision and immediacy in the top tongue.

- Exercises must be practiced patiently and repeatedly with the goal of making the top tongue an equally comfortable way to articulate.

- All of your single exercises can be migrated into the world of double tongue.
What speech syllables are useful when describing the tip/top LEGATO double tongue?

- Duguhduguhduguh
- Tuhkuhtukuhtuhkuh
- Doogoodoogoodoogoo
- Tookootookootookoo
- Ticketicketicketick
- Teukeuteukeuteukeu
Why are these such long words?

- By stringing these syllables into long words before speaking them, we intuitively keep our vocal cords vibrating.

- Although we don’t actually use our vocal cords when we play the bassoon, the principle of continuous airflow applies.

- The idea of a continuous vowel is the key to a good legato - whether single tongue or double tongue.
The reed acts like your vocal cords

- Obviously the comparison is challenging because the vocal cords vibrate independently of speech articulation.
- Whereas the reed vibration is always compromised by the use of the tongue.
- Still, if our goal is to sing...
- We need the reed to feel constantly tethered to air flow.
What is my favorite syllable?

- “Ticket” works, but you might prefer “Teukeut”
- It’s a lot like the German umlaut Ü - an “ooo” vowel with the tongue more forward
- Choose the syllable that most naturally reduces mouth cavity volume
- You’ll find that your preferred syllable may depend on whether you’re playing low, middle or high registers!
Let’s do some simple legato tongue exercises.

- Using only the bocal eliminates all the resistance and much of the discomfort of the double tongue process.

- Always begin with a long tone. This focuses your attention on the importance of airflow.

- Start with some single tongue legato exercises - just the tip tongue.

- As you move the tongue to the top of the mouth and begin the alternating double tongue, you must listen carefully.
What to listen for?

- First of all, don’t pay attention to the internal noise you will likely hear here. Some people describe this as a “clicking” noise. It comes from internal conductive hearing and the changes to the ear caused by changing pressures via your Eustachian tube.
Focus on intonation!

- That’s right!! The best way to work on your top tongue technique is to observe the pitch differences between the tip tongue sound and the top tongue sound.
Now, put the bocal on a bassoon

- Now you have resistance and more to control
- The double tongue process must be more efficient
- We will hear larger pitch differences
Why is it so difficult to make the TOP tongue CLEAR AND IMMEDIATE?

- Remember, when stopping and starting the top tongue action you are controlling the reed’s articulation from a slight distance, simply by blocking the flow of air.

- Your tongue is a very flexible organ and with subtle changes in the arch of the muscle you can place the tongue in slightly different positions to reduce the airspace around the reed.

- Most people hang on to the idea that double tonguing is a front and back process, and they stop the airflow too far back in the mouth.
Why is the contact position of the top tongue so important?

- The process of closing off airflow and turning it on again - the TOP tongue - can never be as precise as the TIP tongue.

- A good strategy is to reduce the air space at the front of the oral cavity.

- We want to minimize the volume of air that is responding to the cut off of pressure. This is especially important for the restart of the tone from the top position.

- The less space you allow in the front of the mouth, the less space you will have to re-pressurize!!
The top tongue position...

- Say the word ‘onion’
- Feel how your tongue arches up and a bit forward
- The contact point will be at the roof of the mouth
- The forward shift in position may only be a millimeter or two to be effective
It feels like the top tongue release is pretty much the same as a breath attack!

- Exactly

- Breath attacks are a hugely important part of your bassoon articulation skills, but they are challenging to execute really quickly and very difficult to achieve in the bottom register of the bassoon

- Breath attacks are a Webinar all by themselves
Organizing your legato double tongue practice.

- The absolute key is to learn to place equal emphasis on both the tip articulation and the top articulation.
- T-K-T-K-T should always be followed by K-T-K-T-K - try to make them sound the same.
- Start with quadruples, quintuples, septuplets, etc. - with both tip and top starts.
On to Figaro !!!!!
What about triplets?

- Incredibly useful in training yourself to place equal emphasis on the two articulation forms.
- Quintuplets are also great T-K-T-K-T/K-T-K-T-K/
Start at the top as frequently as the tip!!

- Learn to trust your ability to do the top tongue start!
What are the benefits of legato double tonguing?

- It’s all about minimizing tongue action while maximizing the focus on air flow
- It allows us to smoothly engage the double tongue in transitional tempos
- Requires absolute balance of tip and top tongue motions
- Never sounds overly aggressive!
Legato double tongue is easy to explain but hard to do well.

- It takes enormous patience
- Stopped double tongue takes a while to comprehend
Let’s talk about stopped double tonguing...

- It uses the same principal as stopped single tongue
- Air pressure is sustained during the silence
Why did we spend so much time earlier reviewing the stopped single tongue?

- Simple. The stopped single tongue concept can be transferred to double tonguing.
- It helps us develop and balance the tongue mechanics of the two forms of articulation - tip and top - along with embouchure and oral cavity positions.
- Stopped double tonguing is like stopped single tonguing: we learn to keep air pressure and control note length by the tongue alone.
- Legato double tonguing develops elegance and smoothness. Stopped double tonguing develops speed.
Okay, so what syllables are useful when describing the tip/top STOPPED double tongue?

- Dug gud dug gud dug gud
- Tuk kut tuk kut tuk kut
- Doog good doog good doog good
- Took koot took koot took koot
- Tick ket tick ket tick ket
Wait a minute, that can’t be right! Those are all separate words!

- Correct! We’ve run into a basic problem in relating spoken and written speech syllables to the ACTUAL execution of stopped double tongue.

- If we write “tick ket tick ket tick ket” - individual words - and read out loud, our vocal cords stop and start to instinctively and our air flow is not constant
You noticed that, eh?!?

- The problem is... the space between the words
We need a way to write out the stopped double tongue syllables that reminds us to keep up the airflow/pressure!!

- So, instead of tick ket tick ket tick ket tick ket, can add a solid line between each syllable....

- Tick__ket__tick__ket__tick__ket

- What we do during the two held tongue positions [the solid line] will define how good our double tongue is!!
This is the challenging part...

- When you pronounce tick___ket___tick___ket___tick___ket you need to keep your air pressure going although from the lungs through the vocal cords, into the mouth and right up to the point of the tip-stop, keeping that pressure and right up to point of the top-stop “Tick”

- Hold the ‘K’ position with pressure, then reverse the motion “Ket” back and hold the tongue to the reed with that same constant pressure

- It takes some concentration to get used to this!

- Stopped double tongue is all about holding the two positions while continuing to supply air pressure!!!
Okay. Two different approaches to double tonguing. Which is most important?

- They are equally valuable
- Practice them in tandem, back and forth
What are my practice methods going to be?

- You can’t expect to start with Figaro or Beethoven 4
- But you can adapt all the exercises your teachers have given you for developing the single tongue
Using alternative rhythms

- Dotted rhythms, groupings of all sorts
- Build your confidence by switching the order of tip/top to top/tip
- Begin your practice on single pitches
- Then start alternating pitches to develop finger/tongue coordination
Fatigue is natural

- Just as extended single tonguing exercise will tire the tongue, double tonguing will produce muscle fatigue.

- It might feel like an ache in the lower part of the tongue.

- Recovery time is important - 30 seconds to several minutes is typical.

- Space out your double tonguing practice, doing 5 minutes at a time and returning several times during a practice session.
Some tricks to help

- Finding the right embouchure/oral cavity size is key to an efficient double tongue.

- Do not expect good results on reeds that require a lot of embouchure pressure. Choose responsive and slightly closed reeds.

- Remember that we normally organize our tongue position to maximize space in the mouth. Double tonguing requires minimizing oral cavity volume.

- Practice shifting from open, resonant mouth to more closed mouth double tongue position.
It’s all about air flow!!

- Flutists and brass players learn to double tongue without having a piece of cane sticking into their mouths, but it’s still challenging.

- Figuring out the two tongue motions unavoidably leads to too much focus on the tongue muscle itself and how WEIRD the top tongue feels.

- Begin and end every double tongue exercise with a long tone to help you focus on that movement of air into the bassoon.
Finally...

- We are all taught to imitate long tones when we are mastering legato single or double tongue.

- But the physics of an acoustical system suggest that stopping and starting a tone causes inertia and inefficiency.

- So, remember to move your air just a little faster whenever you are articulating. This will keep your articulations efficient and irrevocably linked to singing.