

The Clarinet Embouchure

– Carmine Campione

The mouth, in the form of the clarinet embouchure, is the only body part connecting the player and the clarinet that helps produce a clarinet sound. As such, I believe the clarinet embouchure is the most vital link in the production of a clarinet tone and its great importance must not be underestimated. To the extent of one's success or failure with their embouchure is the extent of one's ability to produce a clarinet tone with respect to quality, size, and evenness, and to an even larger degree will determine one's ease and control of that tone. In addition, a person with a good or natural embouchure will be able to come back to their normal playing ability a lot easier after a period of layoff than one whose embouchure is questionable or not as natural. The following is my attempt to explain this vital part of clarinet playing.

In the early 1970's the Selmer Company approached me in hopes that I would play and endorse their new line of clarinets. In 1974, I was so impressed with their series 10G clarinet, and with their desire to manufacture a good product, that I began to play and endorse their clarinet. In addition, the Selmer Company asked me to write an article for their magazine, *The Selmer Bandwagon*. I decided to write on the subject of embouchure. So, in March of 1974, in Selmer's *Bandwagon* magazine No. 71 the following article appeared. In all the years since then, my concept of embouchure has not changed one bit. Therefore, I am including that article in my new book, exactly as it appeared in the *Bandwagon* magazine in 1974.

“Clarinet Embouchure – Again”

By Carmine Campione

So much has been written about the proper formation of the clarinet embouchure that to some, what appears in this article will be old news. But I encounter enough inadequate embouchures to believe that to others it will be new and revealing. It may expose some old myths, or re-enforce others, one man's truth being another's myth. But I am convinced it is one subject about which too much cannot be written from any thoughtful viewpoint, and so here are my own views on this much disputed subject.

As far as I am concerned, the most important part of a correct embouchure is the proper bottom lip/bottom teeth relationship. I shall refer to this many times, and if there is one thing the reader should retain, this is it. This lip/teeth relation is merely the proper placement of the bottom teeth under the lip. The term “lip” refers to the red part, the term “face” refers to the facial coloured part directly below the lip, and the term “lip line” to the portion which separates the two.

In order to test for the proper lip/teeth relation, it is necessary to insert your index

finger in your mouth, or that of a student, and feel where the teeth are. The teeth should be under the lip just on the lip side of the lip line. If any more lip were rolled under, the teeth would be under the face portion. As a result the chin would be bunched up, instead of being pointed, and the sound would be small and subdued. The high notes may be flat, but squeaking should not be a problem. On the other hand, if not enough lip is over the teeth, or the lip is “too thin” over the teeth, the result could be uncontrollable squeaking, and an overall uncomfortable feeling. An extreme of this fault would be to play with your teeth on the reed. It is nearly impossible to get a sound in this manner, but to a small degree, that is what it is like to play with not enough bottom lip over the bottom teeth.

The beginning of a correct embouchure, therefore, should be this proper lip/teeth relation – the chin, somewhat pointed, and the corners of the mouth pulled back. The bottom lip should have a certain amount of tension from being stretched by the corners of the mouth; too much tension or not enough tension would cut off

maximum vibration of the reed.

If a player is able to execute this much correctly, at least 80% of the embouchure should be correct. The remaining 20% concerns the proper position of the top lip and other factors discussed later. Although each of us playing the clarinet is blessed with two lips, in the proper functioning of the clarinet embouchure these two lips are not of equal importance. The bottom lip is far more important. When this is correct, much else will automatically fall correctly in place –hence the 80%.

The muscles should be developed so that the corners can stay back when playing. The two lips coming together should form a straight horizontal line, bending neither up nor down. This is why the term “to smile while playing” is at best ambiguous. If the corners of the mouth already point upward, “smiling” will make it worse. Suffice it to say, since a straight line with our lips and corners of the mouth is our goal, do what is necessary towards this end, whether it be “smiling” or “frowning”. Care should be taken to make sure the portion of the lips on each side of the reed is without muscle

tension. If muscle tension exists here, pinching of the reed will occur and the tone will reflect this.

A good golf swing must have a good follow-through, but that follow-through must be the result of a good swing through the important "hitting area". A good follow-through by itself is worthless. So it is with the obsession with the pointed chin. There is no question the chin must be pointed (the extent of which depends upon the facial make-up of the individual), but this should come about naturally from the proper lip/teeth relation. If this relationship is correct, the chin will be pointed naturally without the player having to work at it. To work at the pointed chin by itself is just like working at a golf follow-through with no regard to the swing which produces it. Forcing the issue by itself may eventually prove harmful.

Another important and sometimes overlooked factor in the formation of a good embouchure is the position of the jaw. The jaw position is proper when the jaw is in its most natural and therefore strongest position. This can be determined by putting a long wooden pencil in your mouth with the mouth set for clarinet embouchure. If the pencil points upward or is somewhat parallel to the ground (you might notice a shake of the pencil) this would be a weak position and would mean the jaw is out too far. To correct this, manoeuvre the jaw inward to where the pencil is not shaking and you feel you could hold it indefinitely. Although possible, it's rare that an incorrect jaw position should exist because the jaw is too far back. Reversing the process mentioned above will correct that.

The importance of proper jaw position is evident upon closer analysis. You will notice as you move your jaw in and out that the lip/teeth position will change. Jaw out too much will leave too little lip over the teeth. Jaw in too much will make possible too much face over the teeth. In addition, since the jaw is instrumental in holding the clarinet for long periods of time, it is necessary for the jaw to be in the strongest position. Probably the most important reason for proper jaw position is its direct effect on obtaining the sound by applying the necessary pressure. I call this the pressure point or contact point. If no pressure is given to the reed, there will be no sound. Too little pressure gives a tubby sound; too much a small, tight sound. The sound you want to achieve and like best (with the possible aid of a second party or teacher) will determine how much pressure to give. But the point I want to

make here is that since pressure to the reed is needed to produce the sound, this pressure should come from the jaw (through the bottom teeth and lip). If the pressure does not come from the jaw, it will have to come from elsewhere. This generally means tightening the lip muscles to get a sound, resulting in early fatiguing of the lip muscles, too much squeaking and a small, tight sound.

One reason why the pressure point or contact point is the most serious of all clarinet embouchure problems is that it seems to be most difficult to convert to the correct pressure point after the wrong point has been set by habit. Drastic measures have to be taken, and usually the only possible solution is a conversion to a double lip

“ The jaw position is proper when the jaw is in its most natural and therefore strongest position. ”

embouchure, as it is easier and more natural to use the correct pressure point with double lip playing.

This brings us to a controversy: double lip vs. single lip embouchure. Although there are advantages and disadvantages of both, the important thing is that the embouchure be correct, whether it is single or double. I play with a single lip embouchure, but if I should play with a double lip embouchure, the difference in sound and visible formation would be difficult to detect. The physical difference, of course, is that with the double lip embouchure the top teeth are covered by the top lip and do not contact the mouthpiece directly. The single lip embouchure I play and teach resembles double lip embouchure because I curl the top lip right up against the upper teeth, instead of placing it under the teeth. A thin piece of rubber on top of the mouthpiece keeps the curled top lip from sliding down easily. In addition, this piece of rubber will absorb vibrations from the mouthpiece (a function which the top lip performs in the double lip embouchure) so that you will be able to hear a purer sound. Chances are if you hear a purer sound, you will more easily play with a refined tone.

Although I play with a single lip embouchure, and generally teach it as well,

I do recommend the double lip embouchure to certain students. The students for whom I recommend double lip are those that I feel (from years of teaching experience and careful observation) will have a difficult time learning a correct single lip embouchure. I may save months or years by suggesting they convert to double lip.

The biggest problem with double lip will be the endurance of the top lip, and sitting while playing will be a necessity at first. But with diligent practice as often as possible each day, results will be evident quickly. Note I said practice often rather than long periods of time – six half-hour sessions would be better than one three-hour stretch. In this way the callus of the top lip will have a better chance to develop quickly. The double lip can be helpful not only as a permanent switch but also as a teaching guide for a good single lip embouchure. For instance, I have had students return from double to single lip after a period of time, and their embouchure is usually perfect after the experience of playing double lip. For reasons I can only surmise, it is easier to acquire a perfect double lip embouchure. The proper lip/teeth relationship seems to come more naturally in nine out of ten cases.

The proper angle of the clarinet is attained by making certain the head is erect and the clarinet is at an approximate 35° angle from the body. The lowering of the head will increase this angle just as the raising of the clarinet itself would. The important point here is to make certain the head (not just the eyes) is erect. When the angle is correct, you will notice that there will be more reed than mouthpiece in the mouth.

The choice of reed strength naturally depends on the facing of the mouthpiece. The more open the facing the softer the reed needed to obtain the desired blowing resistance; the closer the facing the harder the reed needed. If the reed is too soft, faulty loosening of the embouchure would have to take place to obtain a sound. Too hard a reed might necessitate improper pressure from pinching or biting.

The proper amount of reed in the mouth is approximately ¾ inch or approximately the length of the facing. A correct embouchure may look as if only a little reed is in the mouth, but the important thing is the amount of reed that is free to vibrate. This can be determined by playing open G and increasing little by little the amount of reed in the mouth. When there is too

much, the overtone (actually high D, a 12th higher) will result. When this happens, merely decrease the amount of reed one notch; high D will no longer prevail, and this should be the proper amount of reed. If you increase the angle of the clarinet by bowing your head or lifting up the clarinet, you will decrease the vibrating portion of the reed in your mouth. Or if the bottom teeth are under the face instead of the lip, less reed is free to vibrate in the mouth. Some players compensate for this mistake by making another mistake: they put a great deal of reed in the mouth to get ¾ of an inch to vibrate. This produces a harsh and uncentered sound.

It is not always possible to detect an improper embouchure by sight or the finger-in-the-mouth test. The final test is one of sound. Because there are too many factors contributing to a poor sound with the entire clarinet, we must reduce the sound test to the mouthpiece alone. This is called “crowing” for reasons that will be apparent when you try it. And that is the proper sound to achieve. (Incidentally, crowing is also the best way to begin playing the clarinet or changing to a new or different embouchure.) If the sound is too high, or too low, the fault could be any one, or a combination, of those faults described in this article. If the sound is too high, however, merely lowering the sound by loosening the lip is not necessarily the answer. A good embouchure will naturally have the crowing sound. Just as a physician tries to eliminate the cause of a fever and not necessarily the fever itself, the player should try to eliminate the cause of the high pitch, not just the high pitch itself.

The ability to play many of the clarinet’s harmonics is another method of determining the quality of the embouchure. A player with a poor embouchure will have great difficulty getting them out. From low E,

for instance, he should be able to play middle B (up a 12th) without the register key. Then with the register open (or closed if you really get good at it), one should be able to play G (up a 6th), high C (up a 4th), high E (up a 3rd), and high G (up a 3rd). The same could be done from low F and so on. But the harmonics that come out easily will decrease all the way up to open G, when at most only two or three will come out. The inability to play these harmonics does not automatically mean the embouchure is bad, but getting them out well is certainly an indication of a good embouchure.

After a correct embouchure has been achieved, care should be taken to avoid bad or peculiar habits that destroy what has been achieved. One of the most common ways to destroy a good but not completely developed embouchure is taking big, quick breaths that tend to change the proper lip/teeth relationship. This bad habit is generally formed during prolonged playing periods, and its effect on the embouchure is not noticed. To avoid this pitfall, consciously maintain the proper lip/teeth relation throughout the entire process of taking breaths. It helps to remove your top lip and teeth from the mouthpiece in order to take your breaths. This process may seem to raise the head, and actually it does, but you will notice the lip/teeth relation will not want to change much, if at all. After breathing in this way for a short period of time, usually just a few weeks, a return to normal breathing (usually through the corners of the mouth) will prove more successful, since the proper feeling has already been established with those weeks of coming off from the top of the mouthpiece.

Another pitfall is the adjustment of the bottom lip while the top lip is on the mouthpiece. Make sure that adjustments

are made (for reasons of comfort and better feel) in the following manner: to adjust the top lip, make sure the reed is in contact with the bottom lip and the proper lip/teeth relation is correctly set; to adjust the bottom lip, make sure the top teeth and lip are not in contact with the top of the mouthpiece. In other words, never adjust the lower lip after the top lip is in place.

The most effective method I know to build up a correct but undeveloped embouchure (as well as to help tone production, breathing and support, opening of the throat and other factors) is the daily playing of long tones. Each tone should be for one full breath, from low E to high C, chromatically, starting pianissimo, with a gradual crescendo to fortissimo, then a diminuendo back to pianissimo. When all these long tones can be of the same tone quality and colour, and can be of the same exact intonation throughout the entire soft/loud range (not sharp when playing soft and flat when playing loud), then you know you have arrived. Any imperfection in the embouchure, improper breathing and support, and particularly a too soft reed will prevent the player from playing good tones as described above.

It has been said that a picture is worth a thousand words. A face-to-face demonstration of the proper clarinet embouchure would certainly be quicker and more thorough than an essay. But I sincerely hope that my thousand words are at least worth a picture.

Mr. Campione, a graduate of the Curtis Institute of Music, is clarinetist with the Cincinnati Symphony Orchestra and Adjunct Professor of Clarinet at the College-Conservatory of Music in the University of Cincinnati.

In the 25 years or so since writing this article, although my concepts of embouchure have not changed, I have gained some insights, developed more efficient techniques of analysis and correction, and have enjoyed the natural benefits of what those years’ experience of teaching embouchure to the many hundreds of students has provided for me. I would like now to share some of those insights, those techniques, and those experiences.

In the original article I used the number

of 35° to determine the proper angle of the clarinet. That number is not necessarily wrong, but it could be misleading because I have discovered the proper angle could vary slightly from person to person. Instead, what I wish to say years later about the proper angle of the clarinet is this:

When you form your proper bottom lip/teeth position, before putting the clarinet to your mouth, you will notice that there is an angle formed by the lip over the teeth. To attain the proper angle of the clarinet, merely conform the reed to the same angle

and contour that is already formed by the lip. Even though the degree of the angle will vary only slightly from player to player, it will be natural for each person equally. It may be 35°, it may be slightly more, or slightly less, but it will be natural and correct for everyone.

In addition, it should be noted that a person with a pronounced over-bite (upper teeth forward of lower teeth) will need to have the clarinet closer to their body. And, conversely, a person with a pronounced under-bite (lower teeth forward of upper

teeth) will need to have the clarinet further away from their body.

Without a doubt the most difficult embouchure problem to solve is when a student has great difficulty keeping the proper bottom lip/teeth relationship or contact point under the necessary jaw pressure required to play the clarinet, thus collapsing the embouchure with a visible sign of the chin bunching up. When this relatively rare instance occurs, the following exercise is most helpful:

While using one's finger to determine the proper bottom lip/teeth position, press that finger down and slide it into the mouth with continued pressure.

Practice this procedure until the necessary muscles can be activated to maintain the proper lip/teeth relationship under the pressure from the finger without any movement, embouchure collapse, or the bunching up of the chin. If your lip withstands the finger pressure, you know your embouchure will not collapse because of the clarinet.

If a student still cannot achieve a correct contact or pressure point and refuses to play with a double lip, that student should attempt to practice playing single lip without the top teeth on the mouthpiece, temporarily, in order to prevent any pressure coming from the top teeth. Playing in this manner can only be done for very short periods of time (five to ten minutes), and the producing of a sound is very difficult. However, it will make the player aware of the proper working of the bottom lip with respect to the proper contact or pressure point, and, in time, improvement and success for a good embouchure are

most often the result.

The bottom lip should be stretched by means of the muscles of the corners of the mouth to maintain the proper lip tension, in essence negating all the pressure from the lip. The pressure now comes from your jaw through your teeth making the lips a passive link between you and the reed. If anyone advocates an embouchure like a rubber band, a cushion, a circle, or pressure from the top lip, they make the lips become active, which I believe negates the maximum benefit of a good embouchure. This is also the reason puffing your cheeks is bad, because it affects the tension in the bottom lip by collapsing that tension, thus creating a fleshy base which tends to stifle the vibration of the reed. When proper tension of the lip is not maintained, the lips play a too active role in the working of the embouchure. I believe, in a good clarinet embouchure, the lips are passive, not active.

Sometimes in the course of making an embouchure change, air leakage may occur. This leakage is usually caused because the sides of the bottom lip are no longer wrapping around the reed or pushing up to meet the top lip. This change, although freeing up the sound by freeing up the vibration of the reed, may temporarily cause some air leakage. This leak should eventually go away as the top lip will learn to come down to fill that void left by that portion of the bottom lip which is no longer pinching the sides of the reed or coming up to meet the top lip. If a conscious effort needs to be made to reduce the air leak, you should work to make the top lip come down to seal with the bottom lip, which should no longer be there pinching the sides

of the reed. This is accomplished by practising temporarily with the top lip in a frown-like or reverse-smile position until air leakage is considerably reduced or stopped.

When attempting to play with a single lip embouchure, it was suggested earlier that the top lip be curled as if it is snuggled against the outside of the top teeth. With this formation, the top lip will have the same appearance and function as it does when playing double lip. However, when taking breaths, the top teeth should not be seen, or visible (except for possibly the very lower portion of the top teeth), as this would indicate a separation of the top lip and top teeth. Instead, the top lip and top teeth should work as one unit. The visible showing of the top teeth during a breath would indicate a breakdown in the proper function of this part of a good embouchure. The solution to this problem is, when taking breaths, to take the top teeth and top lip off of the mouthpiece in order to train them to work together as one unit. After this has been accomplished, then regular breaths can be resumed.

For those attempting to play with a double lip embouchure, at first it may be necessary to play with softer reeds, or to play only sitting down, or to play balancing the clarinet on your knee. But, eventually, you should be able to return to playing proper-strength reeds, or standing while playing, and even marching should be possible.

As stated previously, I play with a single lip embouchure. This is often an advantage for me when I recommend and teach students to play with a double lip. They

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seem to instinctively know and trust that my recommendation of double lip is for their benefit, and not a recommendation to copy me. The goal of a proper single lip embouchure is really an attempt to imitate the more natural double lip embouchure as closely as possible, so that it functions just as naturally.

I would like to recount a true-life situation about a very talented graduate student with an atrocious embouchure who came to me from a prominent university. Her embouchure had taken her two years to develop. Not only was it one of the worst embouchures I had ever seen, but it took approximately five seconds to get it set. The thought of another embouchure change, for her, was absolutely unheard of because of the gigantic effort it took to learn to play like that in the first place. Finally, in her second year of graduate study she decided to take a crack at an embouchure change. In five days, she was playing double lip as if she had been playing it all of her life. Just a few months later she soloed with the College-Conservatory of Music Philharmonia Orchestra. What had taken her two years to learn atrociously, she was able to learn properly and naturally in five days.

To conclude this chapter on embouchure, I have left for last the most important discovery I've made since the writing of my first embouchure article 25 years ago. That discovery is the answer to my most perplexing question of exactly why do a great many more students play with a correct embouchure, more easily and more quickly, playing double lip than playing with a single lip embouchure. I knew it to be true, but I didn't know why. I knew it had something to do with the fact that we are bisymmetrical creatures, having two eyes, two ears, two nostrils which want to move together, and that our two lips followed this natural bisymmetrical principle. I knew that the single lip embouchure, which is lip to teeth, contradicted this natural principle, somewhat like one's left ear being coordinated with one's right eye rather than two ears or two eyes working together. I also knew that anyone smoking a cigarette or drinking from a straw would probably never hold the cigarette or the straw with a combination of lip and teeth. Teeth to teeth is possible, but the overwhelming choice is lip to lip. Although I knew all of the above, I still didn't know why – I still didn't have the answer to my perplexing question. Then about 10 years ago, after many years of

observation and analysis, I believe I finally found the answer to this question. I would like to now share my discovery with you...

The main key is that there is very little manoeuvring room, or very little choice, as to where the top lip goes under the top teeth when attempting to play double lip. Because of this, and because we are bisymmetrically built, that top lip position now influences, and may even force, the bottom lip to bisymmetrically conform to the top lip position. And, guess what? That corresponding bottom lip/bottom teeth position now bisymmetrically conforming to the top lip position is exactly where the bottom lip/bottom teeth position should be - **underneath the lip, just the lip side of the lip line.** And, as stated earlier, when this position is correct, much of a perfect clarinet embouchure is also naturally and automatically correct.

Allow me to explain this discovery in greater detail. The possible maximum distance most people can place their bottom lip over their bottom teeth (including their face) is approximately 1½ inches. Of this 1½ inches, eliminating the extremes, ¾ to 1 inch is probably what anyone would use. Now when playing single lip, any part of this entire ¾ to 1-inch lip/face area can be used for the bottom lip to be over the bottom teeth. However, when playing double lip, the area a person can place their top lip under their top teeth is much less - only about ½ inch. Of this ½ inch, because of pain and discomfort at the extremes, most people will place their top lip under their top teeth a possible area of only approximately ¼ to 1/8th inch or less. In other words, there is very little manoeuvring room when playing double lip as to where to place the top lip under the top teeth, as most everyone will choose approximately the same correct place. Now in doing this, because we are bisymmetrical, it then forces the bottom lip to conform to the bisymmetrically correct position of the top lip, and the bottom lip/teeth position is now placed in both a correct and natural way. And that is the reason why the double lip embouchure nearly always produces a perfectly good embouchure in a perfectly natural way in a relatively short amount of time.

The above is my 1999 explanation of a good clarinet embouchure. Although it is very difficult to describe a visual formation or a facial feeling with words alone, I hope I have given adequate insight into the ingredients and

procedures that make up the formation of a good clarinet embouchure.

Excerpted from the book "Campione on Clarinet: A Complete Guide to Clarinet Playing and Instruction". (Soon to be published) Used by permission.

– Carmine Campione was born and raised in Elizabeth, New Jersey, and began playing the clarinet at the age of 10. By the time he was 13, he was already playing professionally in dance bands, as well as being the soloist in various school and local civic functions.

After his graduation from Curtis, in 1961, where he earned both a Curtis Diploma and a Bachelor of Music Degree, Mr. Campione, at 24, auditioned for and won the position as Second Clarinet with the Cincinnati Symphony Orchestra. At the same time, he was also appointed to the faculty of the College-Conservatory of Music of the University of Cincinnati.

In 1998, after 37 seasons, Mr. Campione chose to retire from the Cincinnati Symphony Orchestra. He continues to teach at the College-Conservatory of Music where he is an Adjunct Professor of Clarinet.



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