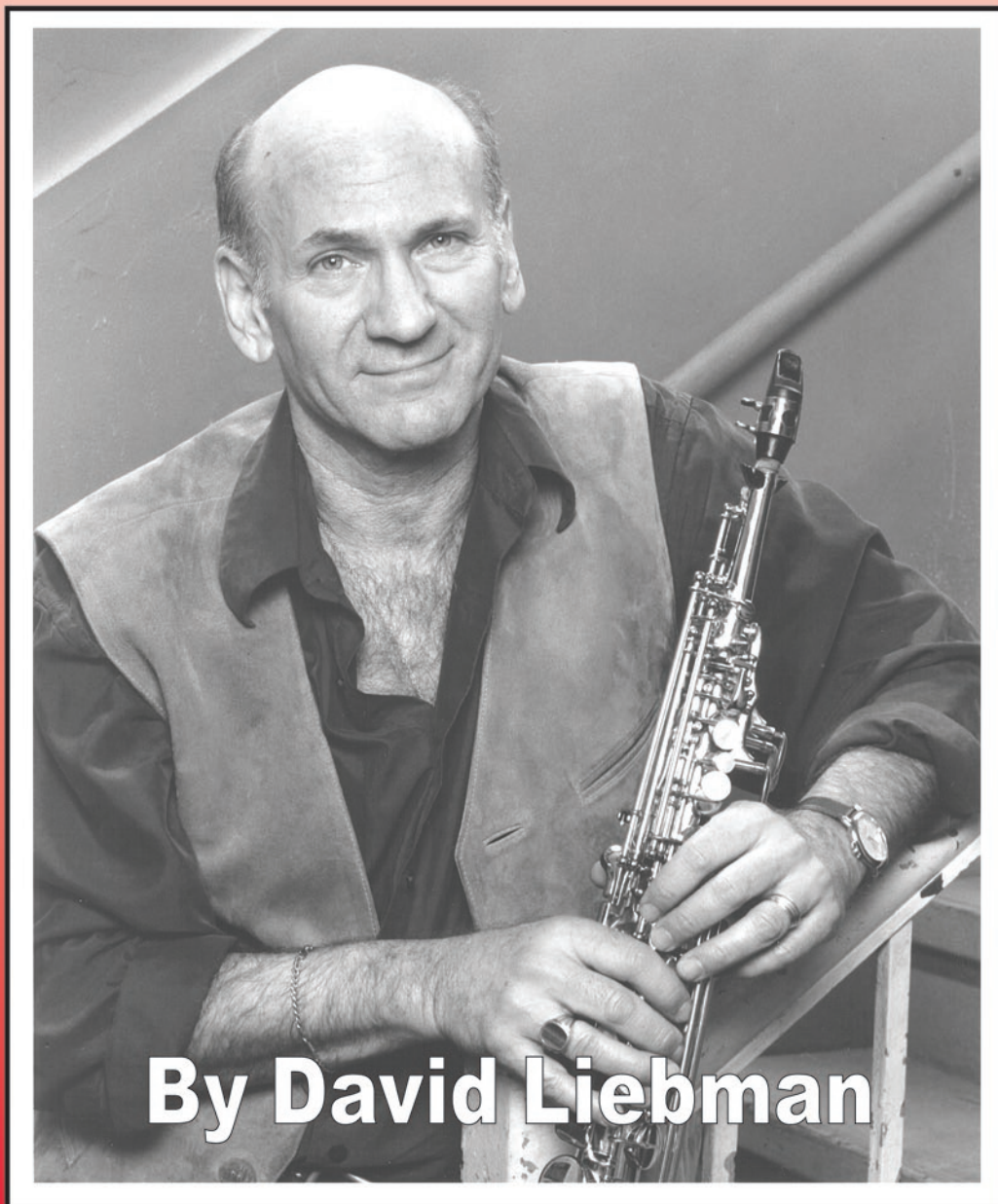


# Developing A Personal Saxophone Sound



By David Liebman

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**By David Liebman**

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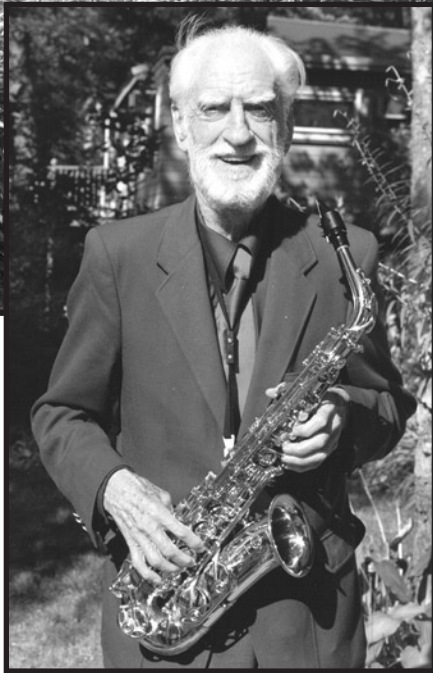
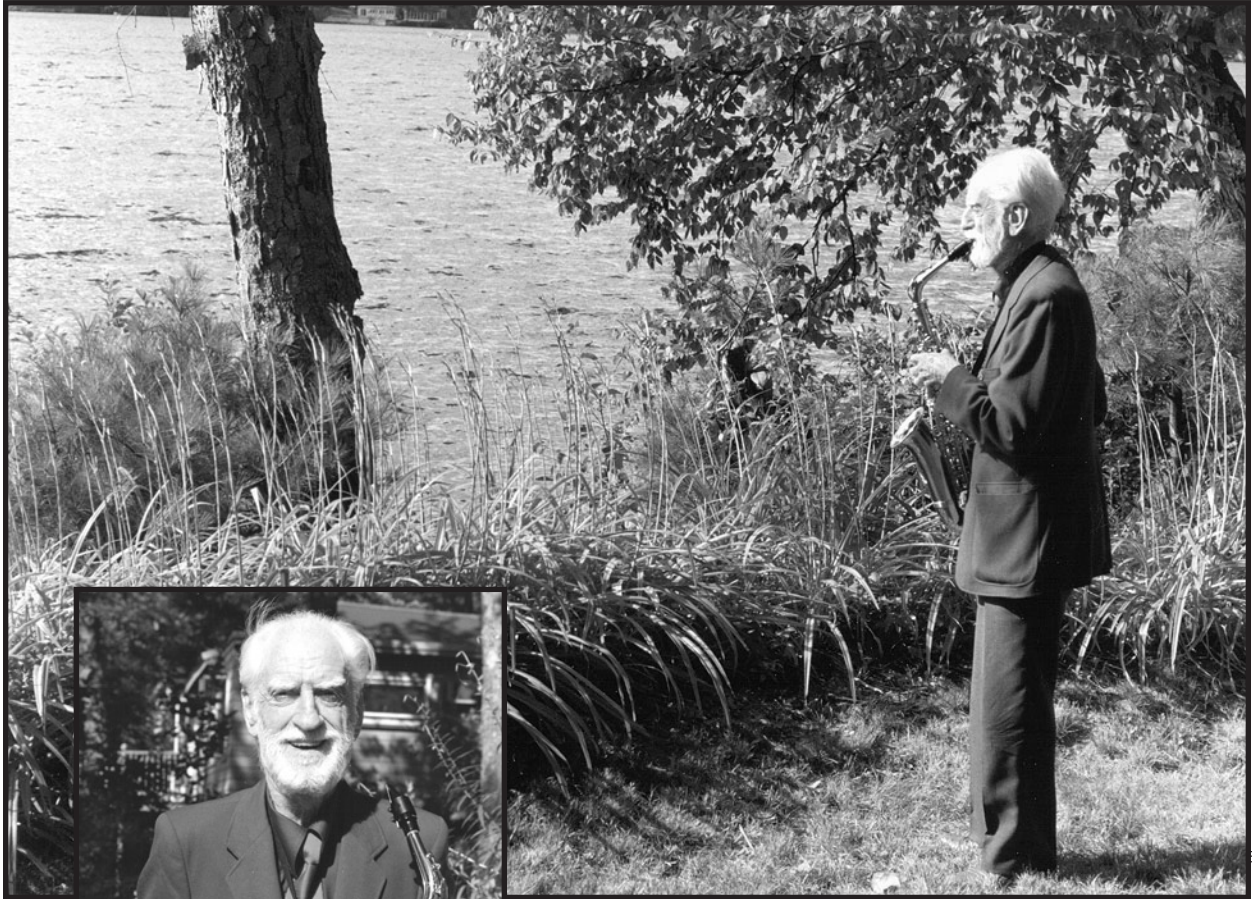
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Cobbett's Pond in Windham, New Hampshire, Joe's summer home for 45 years. Photo was taken in the summer of 1987.



This book is dedicated to a truly inspiring man. A master, who taught with humor, patience, and metaphor — Joseph Allard.

*David Liebman*

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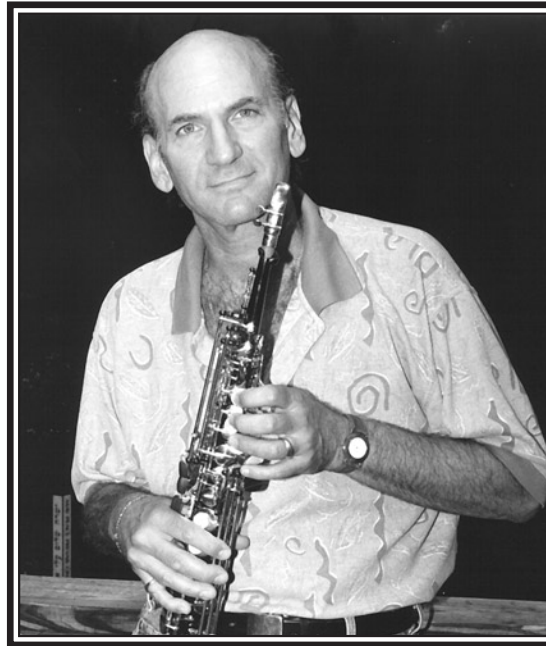
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# PREFACE

Photo by Larry Fisher



This book is the result of several decades of experience as a saxophonist and teacher. Much of the information reflects my experiences from studying with the master, Mr. Joseph Allard. As is the case with any great teacher, they should inspire you to do further research and hopefully develop original concepts of your own.

Since this book was first published I've been gratified to see the positive response it has received as well as several translations that have ensued. Also available has been a video/DVD, the *Complete Guide to Saxophone Sound Production* (Caris Music Services) which is in a sense the visualization of the text you have here. Obviously visual demonstrations of principles and exercises are helpful. But it is in this book that I have clearly outlined the physical and acoustical reasons why certain principles of tone production work. It is my contention that for a mature and serious student, understanding the reasoning behind a concept goes further than mere imitation and repetition for improving skills. If the mind can understand why and how something works there is a higher likelihood that real change and progress can occur.

My first experiences with Joe began as a teenager in New York City after I had studied locally with a fine teacher, Nat Shapiro, who taught me the basics of sound production, fingerings and technique. With Joe came principles and concepts, all eventually leading to the same conclusion which was to be physically and mentally relaxed on the instrument. He would say (in perfect French of course): "To blow is to breathe, there is no difference." The main idea was to train one's imagination to hear the desired sound (timbre as well as pitch) in order to instigate those exact physical movements needed to obtain results, nothing more or less. For Joe, it didn't matter what style of music you played, it just had to be musical.

In all honesty it took me years to comprehend Joe's ideas. This was especially true for understanding the significance of the over-tone exercises which are central to these concepts since they reinforce the principles through concrete examples. A real awakening occurred a few years after studying with Joe when I realized how the tone of the great artists all had in common certain charac-

teristics: relaxation, evenness of sound, a rich and deep sonority, and most of all personal expressiveness

There is one main artistic premise underlying this book. It is apparent that tone on an instrument is the first level of communication perceived by the listener, preceding stylistic and musical elements such as rhythm, melody and harmony. An important objective for any instrumentalist should be to portray emotions and feeling through one's tone. Similar to the way we use our voice when singing or in ordinary speech to express ourselves, one must

recognize and isolate those parts of the body involved in the process. After awareness of what aspects of the anatomy are set in motion, the goal is to maximize one's energy towards the most effective result. In truth, the saxophone is a relatively easy instrument to produce a sound. If bad habits lead to unnecessary tensions, there is less likelihood that the performer can discover his or her persona on the instrument, let alone perform at a high level, especially if you factor in all the normal considerations which go into playing music. Of course after the main principles are understood, each musician should and will naturally customize the concepts to fit their own personality, needs and technique.

This book (a new edition with minor additions) is meant to put any saxophonist, regardless of style on a firm footing without being at a disadvantage in the pursuit of a good tone and in the final result, enjoyment of the instrument. §

*David Liebman*

June 2006

Stroudsburg, Pennsylvania

USA

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# ACKNOWLEDGEMENTS

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Judith Ferland, drawings and art work  
David J. Gibson, book design  
Michael A. Black cover photograph of David Liebman  
Ralph Morgan, diagram and explanation of the saxophone mouthpiece  
Elaine Zajac, music copying

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Over the years my ideas and concepts of the saxophone sound have been influenced by the following books:

- *The Inner Game of Music*, Green and Gallwey  
Anchor Press/Doubleday, Garden City, NY., 1986.
- *Music, Physics and Engineering*, Harry Olson  
Dover Publications, NY., 1967.
- *The Science of Breath*, Alan Hymes; Institute of Yoga Science  
Honesdale, PA, 1979.
- *Awareness Through Movement*, Moshe Feldenkreis  
Penguin Books, 1977.
- *The Master Speaks*, Joe Allard and Jay Ira Weinstein  
RIA Publications, Seattle, WA., 1988.
- *The Physics of Music*, Scientific American Reprints; several articles (Voice, Woodwinds), 1960s.
- *The Art of Piano Playing*, George Kouchevitsky  
Summy-Birchard, Princeton, NJ., 1967.
- *Waves and the Ear*, Van Bergeijk, Pierce & David  
Doubleday, NY.
- *Sonic Design*, Cogan and Escot  
Prentice-Hall, Englewood Cliffs, NJ, 1976.

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# INTRODUCTION

When we learn how to do something, we often pick up bits of knowledge in piecemeal fashion. Inadvertently the sequence of the information is sometimes out of sync and we may have difficulty understanding the entire picture. There comes a point in the development of anything, when it is important to see how all of the parts fit together. Because the rate of learning is by nature slower as the complexity becomes greater, it can be helpful to conceptually see the logical progression from point to point as one entire chain of events. After years of slowly recognizing how this or that element worked separately, I have attempted in this book to show the entire sequence which takes place in playing the saxophone. Although at this time my main idiom is jazz, primarily played on the soprano sax, these principles apply for other musical styles and all of the saxophone family. The differences are of degree and emphasis.

The main premise underlying this book is that the natural functions of the human body must work in tandem with the fundamental laws of physics and acoustics. Specifically, the discussion centers around generation of an air stream in the body which is then directed through the lungs, larynx, and mouth cavity into the reed and mouthpiece before exiting through the horn. The steps along the way are very complex, but when described in detail become easier to comprehend and execute.

In beginning the process some thought must be given to why these principles are vitally important to a performing artist. The goal of any artist is to find his own voice, or sound, on the instrument, in addition to personal musical vocabulary and style. These two pursuits permeate the artistic life of both jazz and classical musicians. This text is intended to make the goal of finding a personalized tone obtainable by demonstrating the ease by which a saxophonist can play, while confronting as few obstacles as possible. In this way the saxophonist is not handicapped in pursuit of the desired sound—leaving one's imagination free to explore musical ideas.

Sometimes simple goals become encumbered by too many stresses and strains due to confused directions or interpretations. The result may bring an artist further away from the goal without knowing why. No one can give a saxophone sound to another person, but guidance can be offered so that the individual is able to maximize his potential in seeking a personal tone.

It is within the voice box that a saxophonist's sound truly emanates. There is the misconception that tone is generated by manipulations at the reed on the mouthpiece. This is only a small part of the process and unfortunately many saxophonists will often exaggerate these movements at the mouthpiece leading to clamping down upon the reed. The result is a pinched reed as well as a tightened throat. When this happens there is little chance for the sound to be personally molded, let alone aesthetically pleasing. Obviously some sound will come out, but not a musical or artistic one. By the time the air stream reaches the mouthpiece, the major portion of the work for a personal sound has already been completed.

A human voice is like a set of fingerprints, unique and one of a kind. The tone of one's voice while speaking is evidence of this fact, as well as when singing, which is an extension of speech. In both activities it is apparent that pitch can be changed by movement in the voice box located in the laryngeal area. Even when speaking there are rises and falls of pitch. These laryngeal manipulations, coupled with the necessary and minimal movements at the reed, can be executed in infinitesimal and subtle ways resulting in the ability to artistically control the shape and color of a sound. In this text, color, sonority, and timbre are used interchangeably. These mechanisms work as a result of ear, mind, and body coordinating together. A sound is heard and cognized; the message is then sent to the involved anatomical parts which are all coordinated to achieve the desired musical result. The saxophonist's task is to make these operations occur in a fast, efficient, and subtle manner, so that the process becomes subservient to the goal and at the same time second nature. This allows energy to be directed towards the artistic details of performance.

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Concerning a concept of sound, I refer to an ancient Chinese description of the qualities which should be present in a satisfying tone: happiness, elegance, sadness, sweetness, subtlety, resonance, and strength. Added to this poetic description are words used by musicians themselves: light, airy, cutting, brassy, bright, full, fuzzy, deep, dark, nasal, piercing, clear, smooth, shimmering, silky, biting, watery, tinny, cool, harsh, dry, sour, screeching, lush, luxurious, velvety, and bell-like. These words allude to the point that within a beautiful and artistic tone, emotions and feelings are apparent. When a saxophonist performs, he is telling a story, painting a picture and relating his feelings as the music unfolds. What the listener first perceives is his emotional response to the sound emanating from a musician. Then the musical ideas of melodic construction, harmonic ideas, rhythmic impetus and form are recognized. Therefore, a saxophonist must be able to manipulate the sound as his feelings and ideas are sorted out. He is constantly striving towards flexibility and the ability to respond, as quickly as possible, to the creative impulse—to his inner ear.

Exactly what is this sound I'm talking about? How does it change colors and become altered from note to note in a truly fine player?

Within a single note, there are other pitches inherent. These additional, hidden notes are called overtones and are a phenomena of acoustics. The highlighting, or suppression of one or another partial in a tone, changes the proportions so that a note can have countless shadings and hues. Shaping the note by manipulating the overtones constitutes the major portion of the expressive qualities one hears in a tone. Other contributing factors are dynamics, articulation, duration of the tone, vibrato, and personal nuance all combined together. It is within the larynx and mouth cavity where most of this tonal sculpturing takes place. The remaining activity occurs at the reed and mouthpiece where air causes vibration and consequent disturbance of material further contributing to the sound output.

For these reasons it is particularly important for a saxophonist to have control, flexibility, and efficient operation of the activities occurring in these areas. Of course there is no one way to be expressive when it comes to the possibilities inherent in

a tonal palette. The very beauty of music is that it is so individual and whatever works, no matter how unorthodox, is fine. What works for one artist (or listener for that matter) as an artistic statement, may not work for another. Everyone's evaluation in the end is subjective. So without a common ground to rely upon, how can one method of operation be superior to any other?

In truth, there are no rules, only concepts. Once a musician has achieved some level of personal satisfaction and reinforcement, the true reward is that he can continue utilizing that explorative spirit with the knowledge and confidence to try other approaches. The correct way of doing something means to make it easier in getting to his own personal viewpoint. If the results are successful, he may find that using the very methods avoided earlier in his training can now provide even more variety and invention. Basically, the adage "learn to walk before you run" is appropriate. The concepts being touted here should lead to more ease in finding oneself, but they are not an end in themselves. True freedom to create comes after the hard and long discipline of really learning how to do something well. When I play now my larynx, tongue, and lip may at times move into extreme positions in order to satisfy an artistic impulse; even into positions formerly avoided at all costs. This is the real process: one learns in order to forget!

In summary, when everything is working smoothly, the body and mind will be at ease, therefore increasing the capability of creating and satisfying an artistic impulse. The less energy spent on technical production, the more available for creativity. Being as relaxed as possible in playing allows the creative mind as well as the emotions to more easily come forth.

The concern of this book is to show how logical is the process of sounding the saxophone. With this knowledge, the true soul of each individual artist can be reached and conveyed to his listeners. This book is addressed particularly to musicians who consider themselves artists; those who rise above mere technique to express something of lasting value. §



Stroudsburg, Pennsylvania  
September, 1989



# Chapter One

## Overview Of The Playing Mechanism

This chapter examines playing the saxophone in several different ways. These are concepts which can be easily visualized so the reader can see a total picture of the process.

The saxophone can be viewed as an extension of the body. In fact, it can be loosely described as the body's mirror image. Visualizing it in this manner, there is a physical continuity between instrument and body. This picture emphasizes a main point of this book: playing should be in harmony with the natural physical flow of the body.

The air stream takes a path from source to destination through a series of consecutive events which correspond to the parts of the anatomy involved. At each point, there is a corresponding effect upon the eventual outcome, which is the airstream entering the vented bore of the saxophone. This book is organized according to the following outline:

**Breathing** — from abdomen source through the lungs and upper chest.

**Larynx** — contains the vocal cords which are set into motion and manipulated by the air causing vibration and resultant shaping of the air stream.

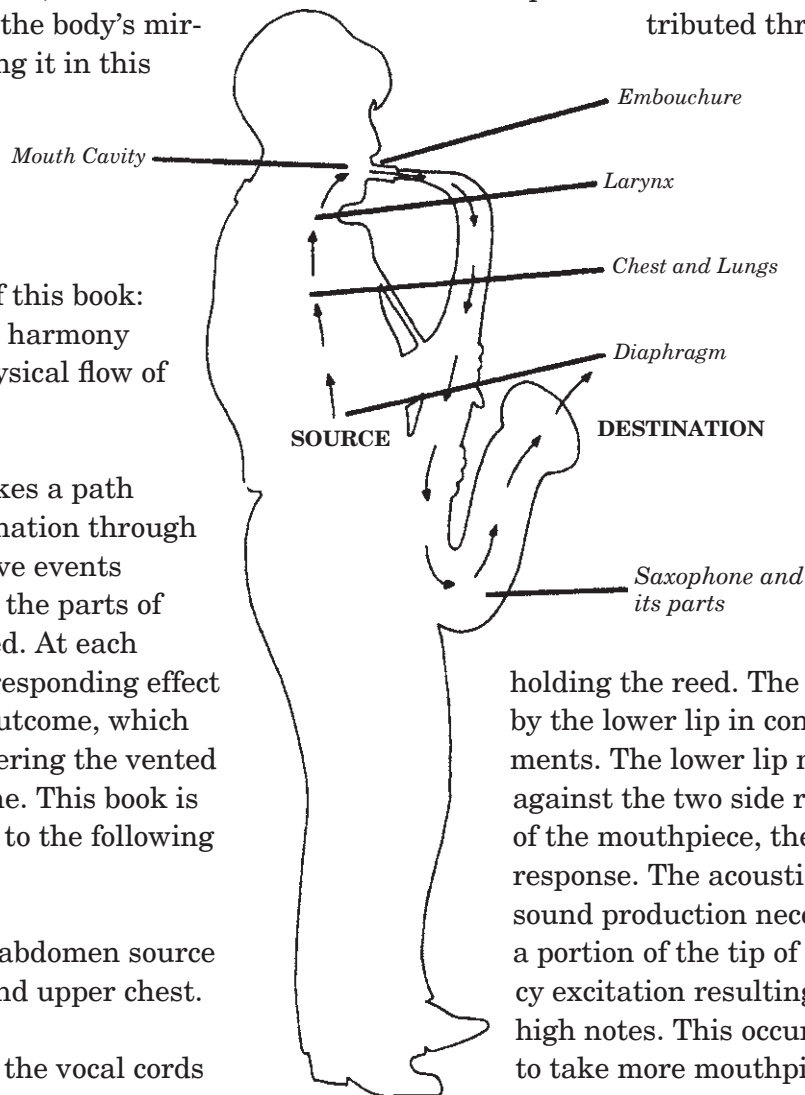
**Mouth Cavity** — specifically the relative positioning of the tongue.

**Embouchure** — includes teeth, jaw and lips; all interact to hold the mouthpiece and affect the air stream's capacity to vibrate the reed.

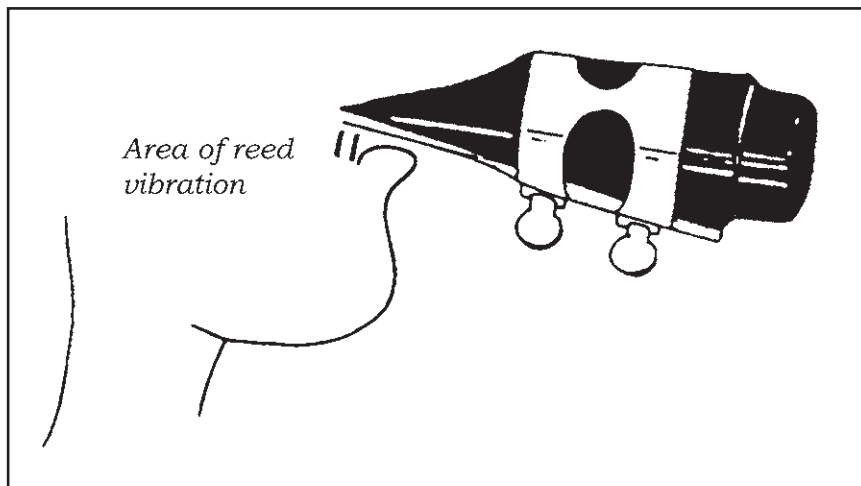
**Mouthpiece and Reeds** — includes mouthpiece, reed, and saxophone body; air stream disturbs reed to produce sound wave which is then distributed through the mouthpiece and saxophone body where fingerings further regulate specific pitch.

Another image is to visualize that the important mechanisms at work resemble two mouthpieces constantly vibrating as well as adjusting. One is the actual mouthpiece

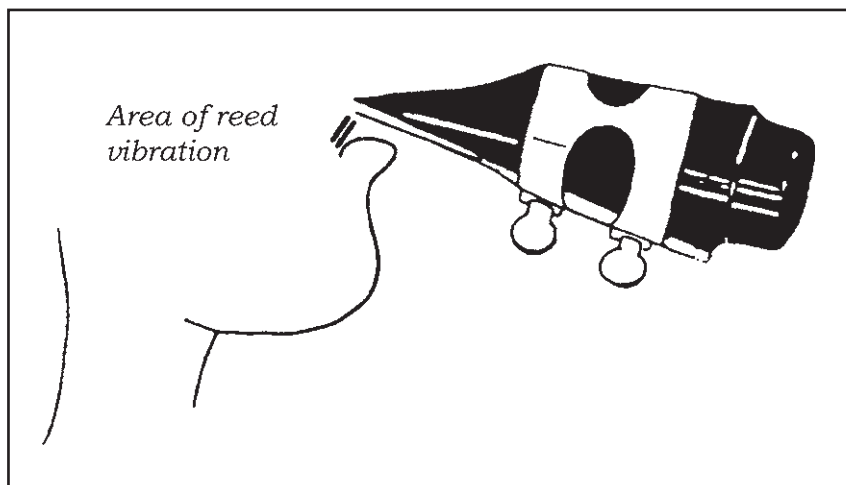
holding the reed. The reed is acted upon by the lower lip in constant minute movements. The lower lip manipulates the reed against the two side rails and front edge of the mouthpiece, thereby facilitating response. The acoustical phenomenon of sound production necessitates uncovering a portion of the tip of the reed for frequency excitation resulting in the sounding of high notes. This occurs when one appears to take more mouthpiece. For low tones, the principle is to cover the tip of the reed with the bottom lip, helping to muffle the higher and more excitable partials. This is accomplished by taking less mouthpiece body into the mouth. The exaggeration of this last movement is apparent when playing in the subtone manner, where the reed must be almost entirely covered by the lower lip.



The other mouthpiece at work is also constantly adjusting and vibrating, and consists of the vocal cords located in the larynx. Sound is the result of disturbance of material, whether it be the lips as on brass instruments, strings and wood on violins, or the vocal cords which are set in motion by the pressure of breath. The imagination in conjunction with the physiological and psychological state (emotions) of the individual at any given instant will set the vocal cords into a mode of action. The emitted frequencies of the air stream affected by vocal cord adjustment enter the mouth cavity where tongue positioning affects the harmonics inherent in the sound. The final influences upon the sound are the result of reed vibration and air circulation in the mouthpiece and bore of the horn itself. Added to this is the undefinable effect of the vibration of the person's chest cavity as well as the bony structure of the head. The key element in this entire scenario is vocal cord adjustment. This activity is intrinsically tied to the body, yet occurs below the threshold of conscious feeling. Speech is a natural function of the body as is its extension, vocalization. We want to develop this natural tendency and work with our body, rather than against it. §



**HIGH NOTE POSITION**  
More of the reed tip vibrates as the bottom lip rolls away from the tip of the reed.



**LOW NOTE POSITION**  
Less of the reed tip vibrates as the bottom lip moves towards the tip of the reed.