

Arnold Jacobs "Breathe Like a Baby, Play Like an Angel" by William Scarlett*

The reputation of master teacher Arnold Jacobs (1915-1998) has spread to every corner of the globe. Students from everywhere came to Chicago to gain his insight into how to play more efficiently and how to think more musically. Equally known were his abilities as a tuba player; he was tubist with the Chicago Symphony Orchestra (CSO) from 1944 to 1988, where he was known as Jake. This combination of master teacher and master player is rarely duplicated especially considering that his students included players of all the brass and woodwind instruments, as well as singers. Even medical doctors sought his expertise on efficient respiratory functions.

What was so unique about his teaching, and why did it cover such a wide section of the music world? He had an ability to analyze both the physical "how to" and the musical "how to" by watching and listening to both the finest players and others who were not so fine. One day Jake mentioned to me, "Bud Herseth doesn't know it, but he was my best teacher. All I had to do was watch and listen to him and then go tell my students to do the same." Early on Jake recognized that to achieve the best results and produce a beautiful musical sound, both body and mind had to be working together. It was not enough to be just a technician. In addition, the creative artist's mind must coordinate everything in the player that contributes to producing the final musical product. His library contained many shelves of medical books on this complex process, and he spent his whole career reducing it to the simplest and most easily understood ideas that could be absorbed by anyone. In the end it came down to just two words, "Song" (head) and "Wind" (body).

Jake recalled his earliest musical instrument. His mother played the piano and bought him an old cornet so he could play along with her. He was totally unaware it was a B-flat instrument. He just found the fingering that would match the note his mother was playing and joined her in the melody. His tone of voice when telling this story always reflected the enjoyment that he received from this music making.

No doubt Jake possessed superior talent from the beginning, because at age 15 he received a scholarship to the Curtis Institute of Music in Philadelphia. He laughed about the day his tuba was mangled on a city bus while on his way to school. Dr. Fritz Reiner took one look at the tuba and told him to get it repaired. Then he ordered his personal chauffeur to take Jake to and from school every day. Other Curtis faculty members made a profound musical impression on Jake. He mentioned the beautiful music of Marcel Tabuteau (first oboe) and William Kincaid (first flute) of the Philadelphia Orchestra. Perhaps from them Jake got the idea that the tuba was capable of playing far more than "oom-pah." To him, the tuba was just as much a melody instrument as the violin, flute, or any other instrument. Of course, the tuba had its own area of playing, too. One day in a CSO rehearsal Jake let loose with a shattering blast that came close to bringing rain. Frank Kaderabek, my partner in the next chair, leaned over and said, "Sounds as if the Queen Mary is about to dock."

Most students in Chicago eventually found their way to Jake's studio, whether to get help in blowing or to just have the experience of being checked out on all kinds of hospital or home-made breathing equipment. My turn came in 1956 when my own inefficiencies brought on by a former "tight gut" teacher led me to seek a better way to play. Little did I know that day would be the start of an association with Jacobs that continues to this very day as I write these words from his former studio.

In 1956 his studio was in the basement of his home on south Normal Avenue in Chicago. The Jacobs family seemed to be a family of savers, and that included the studio too. A small aisle between areas of

"his collection" led to two chairs and a music stand. His collection included books on every anatomical and music subject; music, records and tapes; hospital breathing equipment; anatomical charts (the Thin Man); audio equipment; a StoboConn; a large decibel measuring device; an oscilloscope; tape and wire recorders; microphones; old air gauges; six to twelve tubas; and boxes of tuba mouthpieces. These items were more or less woven together with electric cords, audio wires, surgical tubing, and pieces of rope or string that held them in position. Very impressive to a young student just out of the university!

Even in 1956 his teaching reputation brought students from the Midwest and professional players from various groups around the country. Lessons in those days were somewhat different from the lessons in later years; they were more slanted toward the breathing and not so much on the thinking. He used several large medical devices for measuring vital lung capacity, and he regularly used medical terminology that went with the equipment. Often the words were far beyond the students' vocabularies. Some of us would get together to compare long words after our lessons and would try to arrive at a consensus, or at least we pretended to. As we compared lessons, we found that Jake did not have a set method to teach everyone. His lessons were geared to the needs of each individual.

First lessons started with a spirometer test to check one's lung capacity. Having done many of these tests, Jake could usually guess and be close to the accurate test results. Women usually check out between 3 to 5 liters and men from 4 to 6 liters, unless the person is quite small or large. Chronic breathing problems, smoking, long or short torso, and poor posture, can also alter the vital capacity. The spirometer test often led to other tests to see if the ribs were stiff or if the abdomen was not moving enough. There would be an explanation of the desire to decrease the muscle effort and to increase the airflow followed by his writing two vertical lines in your music book, one short and one long. The short one represented minimal effort and the long one represented maximum air, for the student to visualize the relationship between the lowered effort of playing and the increased volume of air desired. There were many catchy little axioms like, "Breathe to expand, don't expand to breathe," "Blow like you are blowing out a candle," and "Don't learn to play right. Learn to sound good."

Sooner or later Jake compared the embouchure with the blowing ends of oboe and bassoon reeds. The end of the oboe reed was your embouchure shape today and the end of the bassoon reed was the size that one worked for tomorrow. He was fond of having each student use a mouthpiece ring for buzzing, not to change the embouchure, but as he said, "To isolate the buzz." Students could become more aware of the active buzz produced with a good air supply using the ring and transfer this awareness to the instrument.

Often he compared the motion of the breath to the motion of a violin bow. Both must actively move to excite the vibrator. Equipment and words were important, but the main part of the lesson was the encouragement he gave to the students as they tried to make the changes he suggested. He often encouraged students by saying, "Play with inspiration," or "Don't give me that 50-cents note. I want a 5-dollar note." Or, "Don't think about how you sound. Think about how you want to sound." He would also warn, "Routine practice produces routine playing."

My own spirometer test was a real adventure. The spirometer was a hospital medical unit consisting of a large 24-inch (61-cm) high cylinder about 8 inches (20.3 cm) in diameter filled with water. Inside this cylinder was another one slightly smaller in diameter with a dome on the top. A tube connected to the center of the bottom caused the inner cylinder to rise when air was blown into it. The rise was recorded on a roll of graph paper to chart the liters of air blown. It took a while to set up and calibrate this device

before my lesson. Based on all the previous tests he had done, he estimated my vital capacity at 4 liters. He gave me instructions to take a full breath, blow it all out, and keep my mouth tightly around the tube. I followed the instructions exactly, and the inner cylinder began to rise and rise and rise. I blew out all the air I had until the inner cylinder rose completely out of the water and all measurements were lost! His tone of voice and the look on his face told me he was more than a little angry. "You must do exactly as I say. Keep your mouth tightly around the tube so that no extra air can get in to add to your total, etc." he said.

It took time to recalibrate the spirometer, and he talked the whole time about paying attention to details. He added that the spirometer went up to only 6 liters and I should be careful so we could get an accurate reading. Finally he finished and we were ready to repeat the test. I began to blow and blow again the inner cylinder popped up and out of the water, exactly as before. At that point Jake began to laugh with his usual deep belly laugh, and as he sat down he said with a loud voice, "You're a freak!" A later test on larger equipment measured my vital capacity at 6.81 liters, which is far more than a person my size should have. Jake accused me of breathing down to my toes. The original spirometer, or more correctly respirometer, that I "blew up" in 1956 is still here in the studio. Even though it is no longer in working condition, it is worth its weight in memories and the story that goes with it. Countless times after I joined the CSO, Jake would ask me before a heavy concert, "Could I borrow just one lung for today?" followed by, "You should have been a tuba player." In spite of rumors to the contrary, he played his whole career with two lungs, not one.

Near the end of my first lesson, I asked him if he had any written materials I could take home to read about these new ideas that were giving me such immediate and positive results. "No," he said, "but people are after me to write down these things, and I'll do it someday." This answer was heard many times through the years, but unfortunately he never did put his ideas on paper. Only two books have been written about and approved by Jacobs: Arnold Jacobs: The Legacy of a Master by M. Dee Stewart (The Instrumentalist, 1987), and Arnold Jacobs: Song and Wind by Brian Frederiksen, edited by John Taylor (WindSong Press Limited, 1996). Although Jake never wrote a book, Dale Clevenger, first horn of the CSO, has said there is hardly a brass player in the United States who hasn't benefitted from Jake's teaching because of the many people who have learned from Jake or his students. It will be up to all of us who worked with him to continue to spread his ideas.

I am not aware of another teacher who has worked with so many players who have held such diverse professional positions. His approach was simple, and at all levels it intended to help the player develop an efficient blowing habit and then to marry it to the creative artist in the brain. These ideas were applied to all the students that came to him, whether they were brass or woodwind players or singers.

There seemed to be no end to the brass player problems and combination of problems that came to his door. Many of them seemed rooted in some of the brass methods of the early 20th century that stated, "You must support your tone with your diaphragm." Most students, who later became teachers, interpreted this to mean "tighten something." Even today some teachers pass on this misinformation to another generation. The diaphragm is an involuntary muscle that functions when it receives a signal from the brain to move air into the lungs. Tightening something only restricts the free flow of air needed to vibrate the lips. Usually when something is tight down below, it has a parallel tightening effect up above in the mouth area. In addition, separate muscles allow us to inhale and exhale and both may be

engaged at the same time. The set of muscles that pulls a little harder is the one that controls the direction of the airflow.

Many brass players have this problem in varying degrees. In one word, this is called stiffness. Jake would say, "Remember, pressure doesn't make sound, wind does." All of these foolish problems are internal for the wind player and not easily seen or corrected as in a violin player's bow arm.

Jake had a highly developed ability to zero in on the main problem or problems and to suggest a solution. Often the problems had been around for a long time and had been "perfected" by the student. He was particularly annoyed at students who liked to self-analyze. He said to some of them, "Scientists evaluate, musicians send. Don't be a scientist. Perform." Or, "Stop looking under the hood for the problems. Get your head out, go around, and take hold of the steering wheel."

Other serious problems that were examined and treated included: chest-only inhalation, abdomen-only inhalation, unnatural rib motion (some flute players), small vital capacity, too little air used, tongue position too high or too stiff, throat opening small or stiff, embouchure starved for air, etc. Any combinations of these can become very complicated cases. Jake studied each problem from a physical and a musical point of view and found solutions to each one. To put these air problems into perspective he would say, "Never sacrifice tone for a breath." As important as air is, making beautiful music is the number one thought and goal.

The second area where Jake worked to improve students' playing was in the thinking process where sound is created in the brain. He would say, "There must be many well-defined sounds in the brain in order to produce musical sounds." Further explanation revealed that the beautiful sound in the head for each note became the nerve signal for each note that traveled down the seventh cranial nerve to the lips. The perfect thought would include every facet of the note including pitch, tone, articulation, volume, etc. This was a rather revolutionary idea to players whose past learning was mainly a physical challenge of "how to play the instrument" or "how to play correctly." Players who tended to play by the feel of muscle tension, body position, mouthpiece placement, and other physical guides had a difficult time giving up these supports to the idea of just, "Hear it in the head and duplicate it." Players who think mainly "song" use only the muscles that are needed to duplicate the musical notes heard in the head rather than using excess muscles to achieve the right "feel."

Jake was quick to say that old habits cannot be changed, because they are in your memory. We need ideas that are "new and strange" to get around old habits that are in our way. He was full of new and strange ideas that always seemed to be what the new student needed. One trick he used on trumpet students started by asking the student to play the opening of Mahler's Symphony No.5. After the student finished, he asked if they had ever heard Herseth play the excerpt. The student usually said yes, and Jake would ask if the student could hear him playing it right now in their head. When the student answered yes, Jake would ask him or her to play the Mahler again only this time, "Please play it like Mr. Herseth." This time, when the student finished, Jake would have a twinkle in his eye and say, "Oh my, Mr. Herseth sounds better than you. Doesn't he?" Often this was the first demonstration to the student that by thinking better, better music could be produced. Other comments followed like, "Playing your instrument is not tonguing, fingering, and buzzing. It is hearing the song in your head and recreating it." Or, "Song is the blueprint for making music."

In all the years I knew Jake, I am not aware of any embouchure changes he made on any brass players. He often talked about all the poor-functioning embouchures that came to his studio, but he readily added they were mostly starved for air, not in need of a change of mouthpiece position. The lip will buzz if it gets enough air. If it is starved for air, no embouchure change could possibly help. He sometimes commented on the variety of embouchures that exist in the world, and would refer to Philip Farkas's book, *The Art of Brass Playing* (Wind Press, 1962), that showed pictures of all the CSO brass player embouchures. No two of them were alike and according to some embouchure-changing specialists, they all needed a change. Of course, they were all accomplished musicians playing in the CSO.

Jake himself perhaps had the oddest embouchure of all, which he enjoyed showing off with a mouthpiece ring. His embouchure from end to end was sort of "S-shaped," and he could buzz with the mouthpiece placed anywhere between the corners of his mouth. He said anyone could learn to buzz anywhere on the lips because the same nerve signal went to all the muscle fibers of the lips from corner to corner. The embouchure is just a muscle that needs a nerve signal to be motivated. Like any muscle, it cannot think or operate on its own. It is just a slave needing a command by the master, the brain. If we form an embouchure position that is not musically inspired, we interrupt the good musical signal by imposing some preconceived muscle position or mouthpiece feel in place of the musical thought we should be using. He has said, "There is no need to think about our lips before we play any more than we have to think about our vocal chords before we speak. Listen to good sounds in the head and the embouchure will follow." He was firm with his students in letting their embouchures find the best position for making music, which then allowed the brain to form the three embouchure variables: length, thickness, and tension. He said, "Never set rules for embouchure position. Set rules for the musical results." To teachers he said, "Don't teach embouchure, teach sound."

In 1973, Jake leased Room 428 in the Fine Arts Building in Chicago which he kept as his studio for 25 years. Because it was only two blocks south of Orchestra Hall it was convenient to get there for teaching whenever the CSO schedule permitted. He was careful to take all of his collection from his basement studio to his new one. At the end of the 25 years, he still had most if not all of this equipment. By then, some of the devices were so old and obsolete that he could not find a shop that knew how to repair them. One student took a photo of the studio about 10 years ago as a souvenir of his lessons. Last year the same student came back and was surprised to find not only the same equipment but most of it was in the same place as it was in the previous photo. Yes, Jake was a saver.

During Jake's teaching years, the equipment used for breathing correction changed quite a bit. Large, heavy medical devices have been replaced by plastic breathing aids that are as functional though not as accurate as the hospital type. The large spirometer can be replaced by a hand-held plastic Voldyne that measures up to 6 liters. Various gauges and surgical tubing for testing fast inhaling and exhaling have been replaced by the Inspiron. Four-, five-, and six-liter rubber bags can be replaced by a less expensive plastic bag with a piece of plastic tubing and a rubber band. The Breath Builder was another welcome addition a few years ago. The large StroboConn has been replaced by small hand-held tuners, and large decibel meters have been replaced by hand-held units from Radio Shack. Years ago, Jake designed a hollow tube to be blown with a compound gauge at the other end. In the middle of the tube are several different-sized holes that can be covered at the direction of the teacher. The gauge shows units of air pressure in each direction whether blowing or sucking. It is useful for working with students whose breathing is either stiff or inadequate. There is no medical equivalent of this device.

Jake was the first to find and use all of these breathing devices in wind instrument teaching. In earlier years they were available only in his studio under his supervision, but in recent years some students purchased inexpensive plastic units to continue their lessons at home. Jake commented negatively on those who would practice on the devices but fail to transfer the benefits to their instrument. The only value of the devices is to learn from them how to breathe efficiently and then apply that knowledge to the instrument. Without the transfer, the devices are worthless. Good breathing is only one part of being a good musician, not an end in itself. Jake would say, "Go for the goal, not the method to get there."

Jake's teaching years included frequent experiments directed at improving every facet of the playing and teaching world. His studio contained the remains of many experiments known only to him. The earliest experiment I know of occurred in the late 1950s. He took the principal brass players from the CSO, including Adolph Herseth, Philip Farkas, and Robert Lambert, to the University of Chicago laboratory of Dr. Benjamin Burrows. The purpose was to measure air pressure in the mouth while playing in different octaves. A tube was inserted into the side of each player's mouth that was attached to a pressure gauge. These tests indicated that each time a player went up one octave, the air pressure nearly doubled. This was a clear indication that brass players should concentrate on playing low notes with the least amount of pressure or effort. Then when that pressure is nearly doubled and then nearly doubled again in the higher octaves, less air pressure is required. This result fit beautifully with his ideas on using lots of air to play, because with less air pressure the need for more air quantity becomes necessary.

During the last five years, Jake tested players on how much of one's concentration while playing could be turned over to the music making in the head (song) and how much should be reserved for the wind production. In the 1950s, he told me the ratio was 90% making music and 10% good blowing. (The term "song and wind" had not been coined yet.) In recent years, he told students the ratio should be 85% to 15%. Recently, Jake tested more experienced players. He believed more and more that professional players could turn almost all of their concentration over to making beautiful music. Observing world-class soloists with the CSO would make this theory quite believable.

Jake's method was to always be looking for a better way. His pattern of research throughout the years was to first formulate ideas and then test the ideas on himself, followed by tests with selected students, and finally by tests with experienced players. Most students did not know that at times they would be part of his test group. Tests with the experienced players were more like a gathering of friends.

The love that was shown by this outstanding human being goes beyond the playing and teaching. He always had time for everyone who came around, was friendly to all, and tried to help every player who had a question or problem. Jake was like a big brother, father, grandfather, or best friend to everyone around him. He was devoted to Gizella, his wife of more than 60 years. He rarely got ruffled about anything and problems never seemed to be monumental. Even Fritz Reiner, with his well-known disposition, was called "O1' Friendly" by Jake. His friendly smile, jovial laugh, and congenial disposition were a joy to be around. CSO wind players enjoyed engaging in "shoptalk" backstage with him, and he never tired of sharing his insights. Personally, as a student I learned much from him, and without his help I would not have become a member of the "Chicago Sound." As I reflect on our years together in the CSO, I realize he took me under his wing in many backstage discussions on respiration. I am one grateful trumpet player.

The wind instrument world will forever be better because of Arnold Jacobs' pioneering efforts. His friends in Chicago and around the world will miss him, but we have all been touched and uplifted by knowing and learning from him. With all the thousands of players that he helped and who in turn are helping others, his influence will never stop. If he could leave us with one last thought from his studio, I'm sure that it would be one that I can still hear his resonant voice saying, "Breathe like a baby, play like an angel."

Thanks, Jake!

About the Author: Will Scarlett was born in Chicago and was a member of the CSO from 1964 to 1997 where Arnold Jacobs was his colleague for 25 years. He came from a family of brass players and got an early start on cornet in a Salvation Army brass band. Scarlett studied with Renold Schilke at Northwestern University followed by study with Adolph Herseth and Arnold Jacobs. In the 1950s he was first trumpet with the Chicago Lyric Opera and in addition worked with Renold Schilke on the early design and manufacture of Schilke trumpets, which has led to a lifelong hobby of restoring antique brass instruments. Currently, Scarlett plays part-time with the CSO and teaches in Jacobs' old studio - Room 428.

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