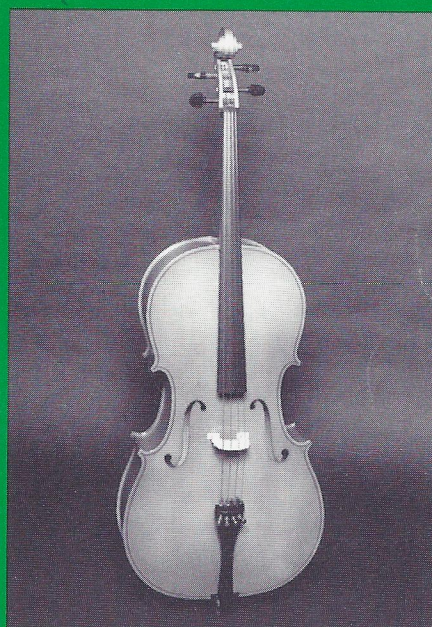




AMERICAN STRING TEACHERS ASSOCIATION

Highlights  
from the  
*American String Teacher*



Cello Forum  
(1984-1994)

Selection Committee  
Steven Shumway  
Peter Spurbeck  
Mary Anne Dresser Bruner, Chair

Editor: Robert L. Cowden  
ASTA Publications Chair

"Highlights" of the *American String Teacher* Forums was conceived as an appropriate way to celebrate the distinguished fifty-year history of the American String Teachers Association, an event that occurred in 1996. Seven forum areas (violin, viola, cello, double bass, guitar, harp and school teachers) were identified and, from the articles that appeared in the period 1984–1994, ten were chosen by a panel (TEAMS, we called them) of experts as the **best** of the lot.

The three-member teams had a difficult task, for among the forty odd articles examined there were more than ten that recommended themselves for republication. Where there was early agreement among the team members those articles were instantly chosen. And from there negotiations occurred to arrive at the magic number — ten.

As you peruse the articles in this volume you will find great variety—among the topics and among the authors. If you avail yourself of all seven volumes, you will be bathed in the best thinking that string teachers and players have expressed in recent years. Topics range from tips for beginners to a day in the life of a professional musician; from string pedagogy in the nineteenth century to what is being practiced today; from advocacy to adjudication; from selecting an instrument to participating in a competition; from repertoire lists to practice procedures; from ways to use research results in your teaching to player health, i.e. the avoidance and/or treatment of performance injury. All this and more will be found between the covers of these seven booklets, the first publications of their kind by ASTA.

This project has involved many ASTA members—twenty-one were a part of the seven TEAMS which selected the articles and some sixty-six authors had their works chosen for this anniversary publication.

Enthusiasm ran high among all who participated. Panelists commented about how much they learned; about how far we had obviously come in the decade represented by the articles; about the camaraderie that developed among TEAM members as they discussed ways and means of arriving at the "top ten." In all, it was a stimulating experience.

Our hope is that you will read and enjoy; that you will develop a sense of history from these articles; that you will come across a new idea, a new etude, a new piece or a new practice routine. It is further hoped that you will develop a renewed respect for our profession, for our eagerness to share what we know and can do with others and for our professional association that provides encouragement for the advances in string performing and teaching.

*Robert L. Cowden*  
*ASTA Publications Chair*

In celebration of half a century of musical and community achievement, the American String Teachers Association is publishing a series of retrospective volumes highlighting some of the best articles published in the past ten years of AST Journals. I say "some" of the best, because all the articles in the *Cello Forums* of these Journals have been of high quality, and have represented some of the most outstanding personalities, events, and literature of our instrument.

The task fell to me, as chair of the Cello panel, to read a total of forty-two articles and, with the help of Steven Shumway and Peter Spurbeck, to choose the best articles for inclusion in this volume. My initial response was, "How hard could it be?" Then I started reading the articles. One after another proved to be well-written, insightful, and clearly worthy of republication.

But after awhile, a pattern developed. The articles contained in this volume are representative of trends in pedagogy and philosophy which have emerged in the past decade or more. From Jeffrey Solow's article on practicing [Summer 1988], we proceed to Helga Winold's discussion of movement and monitoring [Summer 1992]. Barbara Thiem and David Greene write about injury prevention [Winter 1993], a timely subject for the 90's. Paul Stevens presents his thoughts on the development of a comfortable basic set-up [Winter 1991]. Then both Uri Vardi's notes on bow-arm fundamentals [Autumn 1993] and David Starkweather's comments on shifting [Winter 1988] build on the importance of correctly establishing good habits at an early stage.

Our focus turns from the physical approach to practical pedagogical thoughts. Phyllis Young's interview with Margaret Rowell [Winter & Spring 1985] is a tribute to two women (author and subject) who have made substantial contributions to cello teaching in the country and beyond. We hear again from Jeffrey Solow, this time discussing how a teacher and student can determine potential musical careers [Autumn 1989]. Tsuyoshi Tsutsumi presents his observations on performance [Winter 1994]. Finally, one of the undisputed legends of this century, Janos Starker, shares his thoughts on teaching and playing [Autumn 1992].

Taken as a whole, then, this group of articles is representative of the spectrum of teaching philosophies and pedagogical approaches. Interestingly enough, while these articles were written over a period of about ten years, they fit together neatly into a progression of easily approachable information that can be utilized by both experienced and relatively new teachers.

I wish to express my deepest appreciation to Steven Shumway (Miami University of Ohio) and Peter Spurbeck (University of Memphis) for their assistance in choosing, from the wide array of articles, those which are clearly Highlights from the Cello Forum. But my most heartfelt thanks must go to the authors of these fine articles. Without their experience, insight, and inspired decisions to commit to paper the principles they've discovered and perfected in their teaching careers, this volume would have been neither possible nor necessary.

*Mary Anne Dresser Bruner*  
*TEAM Cello Chair*

# What the Right Hand Knows Thoughts About Bow-Arm Fundamentals

Uri Vardi

"As obvious and superfluous as it may seem to mention it, it is my opinion that the basic ill of poor playing lies in the absolute disregard of natural laws" (Emanuel Feuermann, in *Emanuel Feuermann, Virtuoso* by Seymour W. Itzkoff).

My hope is to shed new light on how to approach fundamental questions about teaching the cello while observing natural laws. Most of my curiosity was ignited by my teachers and mentors, especially by Janos Starker, Aldo Parisot, and Eva Janzer. From Starker and Janzer at Indiana University, I learned the logic and systematic work needed to acquire the facility and security to play professionally. With them I also discovered my great love for teaching and helping others. Through his intuitive approach, Aldo Parisot at Yale University provided a wonderful example of a continuing exploration of new means in playing and teaching. The key observation presented here is the importance of efficient organization of the cellist's body in relation to effective, economical, and accurate movements of the right arm.

## Foundation

The more you have a solid foundation, the less effort you have to put into playing. A solid foundation means that a firm triangle is created between the legs and the "seat," a triangle that acts to support the lower back muscles. Letting lower back muscles collapse results in heaviness in the upper part of the body, which can then cause tightening of the shoulders, neck, and arms. I believe there must be a continuous flow of energy throughout the body (feet, legs, "seat," lower back, upper back, shoulders, neck, head, arms, hands, and fingers) and an awareness of the functioning of the entire body in the playing process. To involve each section of the system in the playing, we must be able to sense and recognize each part independently. Both the Alexander Technique and the Feldenkrais Method deal with body awareness and efficiency of movements, so those who are familiar with these approaches may utilize their principles. I believe that, ultimately, it is best to use your own imagination and set of exercises for acquiring sensitivity to the body.

## Weight-Energy Flow

An uninterrupted flow of energy through the body assures effortless, resonating sound production. The same principle applies to building facility. Unfortunately, we are often so accustomed to using a great deal of muscle tension in daily life that unlearning this habit becomes a major project. Uncontrolled muscle tension usually causes blockage of flow and ineffective utilization of weight. A good way to sense this flow and weight with the cello is by embracing the instrument with both arms and letting the energy flow all the way from the heels, along the back, and into the arms and the cello. This sensation can be transferred to the bow by placing the arms on either end of the bow (while the bow is located in the middle of the instrument on one of the strings) and letting the weight flow evenly, via the two arms, into the bow. When using the flexibility of the hair and the stick to bounce the bow, you can feel the natural resiliency and weight of the arms applied into the instrument. The final step might be to transmit the weight through only the right arm into the bow when it is placed at the frog.

## Holding the Bow

A major obstacle in dealing with the bow is the tendency to grab or clutch it and block the flow of energy from the body via the bow into the cello. The main goal in dealing with the relationship of the hand and the bow is to keep the natural shape of the hand unchanged, which allows the bow to become an extension of the arm. Five simple steps can help to achieve this goal:

1. Lift the upper arm and keep it up, using the back muscles. Allow the forearm to drop down and observe the shape of the hand.

2. Hold the bow at the tip with the left hand and bring it towards the hanging right arm, allowing the frog to move into the relaxed palm (pretend that the right hand has no life of its own).
3. Lead the bow and a completely passive right arm (not grasping the bow) with the left hand towards the string. Once the bow reaches the string, move it back and forth on the string with the left arm, allowing it to change location in the stationary right palm until it is at the desired place. This desired place in the palm changes with every individual hand and method of cello playing.
4. Maintaining the height of the elbow, draw the right arm backwards (using the back muscles) until the stick touches the index finger between the two middle knuckles (at this stage, most thumbs still face the first finger).
5. Pronate the arm while touching the stick with the thumb very lightly and letting it slide gently to its place without distorting the hand's shape.

To use the arm's weight effectively in producing full and resonating sound, it is essential to pay attention to the angle between the parts of the fingers that touch the bow and the stick itself. Remember that in using the bow, there are only two factors involved; horizontal (motion) and vertical (weight). When pronating the arm, the angle between the index finger and the stick must be straight if you want to avoid loss of weight on the way from the arm to the bow. This way, the weight is applied absolutely vertically and is fully directed into the instrument. A diagonal angle between the first finger and the stick causes loss of part of the energy.

### **Bow Path**

It is known that to activate the string fully, you must maintain a perpendicular angle between the bow and the string. This angle forces the arm to learn a very specific path. Paul Tortelier used a simple way to teach this path: If you put the bow at a 90-degree angle at the tip on one of the strings and hold it stationary with the left hand, the entire bow is perpendicular to that string. Sliding the right arm along the stick (while imitating with a pronated arm the shape the hand uses to hold the bow at the frog) teaches the exact action the arm needs to maintain this goal of a straight bow. A close look at the arm shows that for the lower part of the bow (around the frog), the entire arm moves and the angle between the upper arm and the body changes. In the middle section of the bow, the forearm starts moving, and there is a combination of changes in angles both between the body and the upper arm and between the upper arm and the forearm (around the elbow). In the upper section of the bow, there is a change in angle only between the upper arm and the forearm, and the hand becomes one unit with the forearm. I find that by concentrating on the changes in angles around the joints, you can focus more easily on the accuracy of the movements initiated by the different parts of the arm.

### **Bow Speed and Bow Distribution**

As well as the right path, it is important to pay attention to the bow speed and to the pre-planning of the bow distribution. By visually dividing the bow into equal sections (2, 3, 4, 6, and so on) and using a metronome to make sure the same length of time is spent on each section, you can regulate the even flow of the arm motion. Notice that the idea is not to stop the motion after each section, but to pre-plan the speed of the entire bow and to learn to control the arm motion within each section. Learning to control the bow speed helps avoid the common problems of running out of bow or finding yourself at an undesired section of the bow. It is essential that the above-mentioned bow path is maintained when working on the bow speed.

I must remind the reader that the purpose of learning to maintain an even bow speed is to eventually be able to alter that speed according to musical needs. Starker teaches another important aspect to bow speed control; he combines controlled breathing with controlled bow distribution. By simultaneously dividing both the bow and the breathing into equal segments, you assure that the bow distribution does not become a mechanical gesture and that the whole system is involved in reaching this goal.

### **Bow Changes And Strings Crossings**

When dealing with the smooth bow changes or with smooth string crossings, you may discover that the farther away from the contact point the change is initiated, the smoother and more effortless it becomes by the time it reaches the instrument. The easiest movements are always initiated at the center of the body and travel into the fingertips.

Different sets of muscles are involved in pulling the bow and in pushing it. A good way to sense the action of the muscles involved in pulling the bow (down-bow) is to place the right forearm flat and straight on a table away from the body. Pull the upper arm toward the body and use the friction between the forearm and the table to feel the muscles working in the arm. To sense the muscles involved in pushing the bow (up bow), lift the right arm in a pronated position and start bringing it in toward the body while the left hand is pushing against it. Notice the feeling in the right arm. To achieve a smooth change from a pulled bow to a pushed bow, you have to start employing the pushing muscles of the upper arm while still using the pulling muscles of the forearm. This way the arm "rounds the corner" at the change, and by the time the action reaches the contact point, it becomes very smooth and is almost done by itself. The same principle applies to the change from a pushed bow to a pulled one (where pulling muscles begin being employed while the bow is still pushed). It is very important to remember that at all times, the joints must allow the action to travel uninterrupted to the contact point. The round action of the bow change can be further modified by involving the joints in the hand and fingers to get the final refinement of the sound. It is a good idea to imagine the frog as an elastic object that can be molded by the hand. The flexibility of the hand (from the wrist outward) is effective only when using the lower half of the bow. In the upper half of the bow, the arm weight has to be transmitted to the string by lifting the upper arm slightly (without raising the shoulder) and pronating the forearm. If the wrist and hand are too loose at this point, contact with the string is lost.

When dealing with string crossing, the same principles apply. To achieve a legato string crossing, there is always a split second when the bow almost touches two strings simultaneously. The arm is forced to be in motion toward the new string ahead of time, without changing either the speed or the arch. With staccato playing, the changes (either bow or string) are abrupt and are meant to be audible.

### **Articulation**

With different articulations of the bow, it is important to pay attention both to the type of contact the bow makes with the string and to the length of each stroke. Realize that in most instances (except for extremely abrupt martelé strokes), the bow arm moves in an arc, and the shape and depth of each arc determine the type of articulation that is created.

I believe in grouping strokes into two families: the legato family (smoothly connect), in which every bow flows into the next, and the staccato family (stopped strokes), where there is a new start for every stroke. For example, when grouping the bouncing bows (the varied spiccatos) with the legato family, you realize that these strokes are very close to the détaché strokes, in which every new stroke is anticipated. Checking the arcs created by the arm in these two articulations shows that the arc created when playing détaché is very flat, and the end of one arc is connected to the beginning of the next. When playing a spiccato of any length, the arc is quite deep, resulting in lightness on the edges, which allows the bow to leave the string.

The control of a bouncing bow is dependent on staying close to the string and concentrating on both the horizontal motion of the bow and the anticipation of the next bow, rather than on lifting the bow from the string for the bouncing effect. Many times an observer would mistakenly think that the hand initiates fast stroke changes; in reality, they are begun by a very slight movement farther away toward the center of the body that is magnified when reaching the hand (providing that all the joints cooperate).

The sautillé is yet another permutation of the détaché, in which the strokes become extremely short and fast and the stick bounces while the hair stays on the string.

In general, I believe it is much more innovative to imitate the sounds of different consonants in language than to think of a specific, technically oriented stroke (détaché, spiccato, staccato, and so forth). The concept of the stroke as language enables the player to use a wide variety of colors and expressions. Unless there is a distinct indication by the composer for playing a *secco* sound, never forget that every consonant, either legato or staccato, has to be followed by a vowel.

I have touched on only a few of the fundamental issues that are always in my thoughts in the search for better understanding and explanation of the effective use of the body while playing. Before concluding, I would like to mention a few general guidelines I try to follow as a teacher.

No two students are alike, and the wholeness of each person has to be constantly observed when dealing with specifics (we shouldn't lose the forest for the trees). I have the responsibility both to constantly challenge my students with new goals that are within reach and to have them question their current level of effectiveness in playing. I try to help my students develop a sensory system that accepts only aesthetic sounds, yet I encourage them to search for as much variety of sound as possible. I try to make sure that everything students do on the instrument derives from *musical reasons* so that no other factors (instrumental, technical, or personal gain) become more important than the music itself.