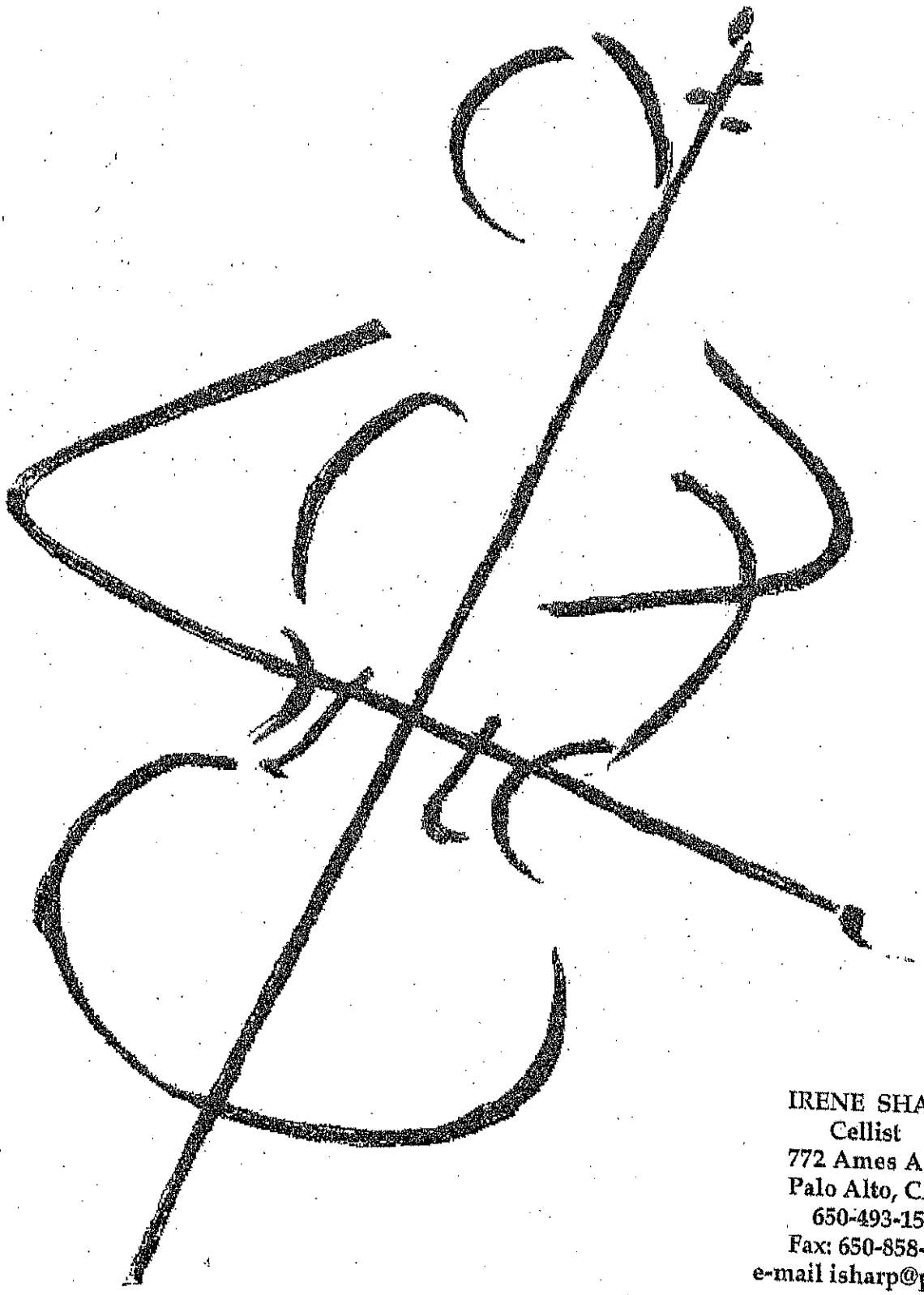

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Important Things to Think while playing the cello

1. Music
2. Sing inside
3. Sit up; feet flat
4. Breathe
5. Head thinks, but does not move with the music.
6. Elbows down
7. Left hand:

Cling to inside of string
Keep the string down
Curve fingers (except first in extension)
Fingers play the notes
Memorize note locations
Fingers do not do dynamics
Arm relocates the hand
Arm does the vibrato

8. Right hand:

Bow hair "velcros" the string
Hair crosses string at right angle
Most bow strokes involve circular motions
String is moved to the right or left
Notes of long duration requires arm motion
Notes of small duration use the bow fingers
Bow fingers can do string crossings
For dynamics move closer to or away from bridge when possible
Dynamics can also be done by "scooping"
For higher or lower frequencies move closer to or further away from bridge.

Cellists Checklist

Chair	Choose a flat seat which is the correct height. Thighs should slant down a bit for more freedom in the hip joint.
Head	Head should point forward and up, balanced, without any tension in back of neck. Head should be free to move easily, but should not duplicate playing motions.
Back	Back is straight, with slight natural lumbar curve. Front of body is elevated as much as possible.
Breathing	Good posture facilitates normal breathing. Correct breathing facilitates easy and coordinated movements.
Shoulders	The shoulders should remain passive and quiet, not confined to a fixed position but able to move. Do not lift the shoulders.
Feet	Feet should be flat on the floor, pointing slightly outward.
Knees	The left knee supports the cello. The right knee is near but free. Neither knee actively clutches the cello.
Cello	The Cello is positioned at approximately an 80° angle to the floor. It is supported by the floor, the chest and the left knee. The "A" string side of the cello should be slightly higher than the "C" string side.
Arms	
Bear Hug	Suspend arms from the shoulder, elbows bent and equally balanced. Arms embrace the cello with a pull directed to ones' own back.

Bird Wings Arms move easily up and down while holding the finger board. Both arms provide transportation for the hands and are therefore light and movable from their connection in the back.

Ski Jump Fingers cling to the string and move along the string towards the bridge. Then pizzicato the string with a snap and loop back (palm out) to the starting position.

Slap Bass Using the elbow hinge, bounce palm of hand between lowest and highest positions of the fingerboard. Let the arm move freely. Do not reach for the "high" positions. Let the forearm cover the distance.

Hands

Knuckle-Knock Knock up and down the fingerboard with a light fist: the wrist joint must be movable for a left hand cling, for vibrato and for easy manipulation of the bow. Both wrists are slightly concave for greater cling and motility.

Bow Hold The bow is balanced on the end of the thumb. The thumb provides a shelf for the bow. The fingers are slightly curved and cling to the stick and frog. The fingers are movable and sensitive to the contact of the hair and the string. The fingers should not extend below the frog.

Left Hand The wrist is slightly concave. The fingers cling to the string. The fingers are curved around the right side of the string, and pull the string to the fingerboard and towards the players' back (not towards the left). The last joint of the finger should be curved. The base joints of the hand are movable and reasonably flat.

Shifting The arm takes the hand where it wants to go. The fingers cling to the string using it as a guide. The shoulder and fingers need not reach. While the fingers cling to the string, the arm transports the fingers to their destination.

Vibrato The vibrato is accomplished by the arm moving the clinging finger in a rhythmic up and down motion. The wrist must be free to move, the arm light, and the finger firmly clinging to the string.

Thumb In the lower positions the thumb is flat and is either underneath the 2nd finger or under the finger that is receiving the vibrato.
In "thumb" position the thumb acts as a servant for the other fingers. It adheres to the string and is directed to the back of the player. The furthest joint of the thumb is straight, but the bone closest to the hand is "out" and visible. When the thumb is on the fingerboard it maintains the stopping of the string for the other fingers as well a playing its own notes.

Teaching How

In the modern world many of us are confronted with devices that enhance our quality of life such as computers, VCRs, cellular phones etc. They do wonderful things for us if one can learn to use them. As we look at these devices they don't tell us what we have to do to turn them on and get the best use of them. They usually come with a difficult manual which we must decode in order to use it.

The cello evolved three hundred years ago. It doesn't give us a clue as to how to make it do our bidding, and neither does it come with a manual. In the hands of some humans it can bring forth heavenly sounds and with others it sounds like a great uncomfortable struggle. Perhaps if we observe the beautiful sounding cellists we can deduce from their movements some things that their techniques have in common. Also, we should take a look at the instrument itself and find out how to "turn it on".

The cello presents us with a box on which are tightly strung strings of different thicknesses and tensions. They are turned on with the bow, whose rosined hairs catch and release the string causing it to vibrate. Originally the player must have used his right fingers to excite the strings as in lute playing, but with the invention of the bow the string could be kept in motion indefinitely and could be articulated in millions of ways.

When the cellist is playing, his technique consists of two basic actions: setting the string in motion and changing its length. If he keeps these simple things in mind, he will not find himself getting into physical trouble. In order to produce the music that he wants, he will not do any action to excess. His actions will be defined by the needs of the music and the knowledge of how to turn the cello on to get the best result.

In order to put the string in motion, we must obey a few rules. The bow delivers the best sound, when the bow is balanced at a right angle to the string. Then we are pulling the string in the direction that the bow is moving. When we are bowing to our right "Down bow" we should have a picture in our mind of the string moving from the right and then back to the left at the frequency of the pitch we are playing. We should be able to feel the movement with the sensitive fingers of our right hand. When we move the bow to our left "Up Bow", we should feel the string vibrating from left to right back and forth through our fingers. In order to effect nuances and dynamics with the bow ,we must explore the various tension levels

along the string. Near the fingerboard the string is a bit less taut. As one moves towards the bridge there is more and more tension. As you move in the direction of the bridge, you develop more intensity in the sound. It works like the bow and arrow. If you pull lightly on the bow, the arrow will drop close to you, but if you pull harder the arrow will have more projection. The tension for producing different dynamics and nuances is inherent in the string. We do not have to be strong to produce it. Rather we only have to excite the string at the right place. As your left hand moves towards the bridge for new pitches, so must your bow move proportionately in order to produce a healthy sound. The speed of the bow stroke is determined by the frequency of the string. For low pitches the bow must go slowly, for higher pitches it can move faster. Occasionally we may need more sound when the bow must move at a faster speed and cannot be put close to the bridge. How do we create more tension in the sound? If we use our natural instincts we will "press" harder. The trouble with this is that if one directly presses hard, the string soon stops vibrating, the sound is choked. Even with less pressure the sound seems constricted. However, if we excite the string by doing a scooping motion, as in scooping ice cream, you create more tension at that spot where the bow meets the string and you still encourage the string to vibrate freely.

The left hand technique has fewer artistic choices than the right. Its duties are more straightforward. It is in charge of the length of the string and also (very importantly) the wonderful coloration of the vibrato. It seems logical to "press" the string down to the fingerboard to produce the pitch that we want; however, this is not so effective for two reasons: the finger must make a very strong node on the string and if there is too much pressure, all the joints of the hand and arm stiffen and therein lie the great danger of tendonitis. A stronger and very much less costly way of producing accurate and well-sounding pitches is to cling to the string with the finger and bring it towards you to the fingerboard. This way the string is securely down and all the joints are free to move in any direction.

Both arms provide transportation for the bow and fingers respectively. The arms must be light and free to move. Therefore there is no need for arm weight. When we are engaged in life's ordinary activities such as eating, or writing, or teeth brushing, we are not concerned with arm weight for our movements; rather our arms move to deliver our hands to the task at hand. The hand actually does the work.

The experienced cellist and the young student cellist have much in common. They are always experimenting to see what action on their part will achieve the best result. They should both make use of the whole cello. Even young cellists should be encouraged to explore the complete fingerboard from the start. This makes them feel comfortable in any position later on. Everyone should be flexible enough to produce whatever colors and expression that they desire.

Here are some actions for discovering the whole cello and help us remember the ways to move easily on the instrument. BEAR HUG: The bear hug positions the cello and gives us the first glimpse of strength and flexibility. It also explores our use of power on the cello. As we bring the cello towards us in an embrace we are finding our sense of power. It comes from the back and is delivered through the fingers. The left fingers will cling to the string and create the pitches that we desire and we will cling to the bow and then to the string with that same inward pull. The Bear Hug helps us experience our inherent power. We do not have to practice for power. Everyone has enough; we only have to learn how to use it. When we have our bear hug, we can use its power to stay with the instrument. No one can pull us away if we do not let them, but we can accomplish this with very little apparent effort. This is the kind of easy power we should use when we are playing our concertos and sonata recitals. BIRD WINGS: Here we are moving our arms from our back. Our arms are light, they move easily. Our arms provide transportation for our hand; the arm transports the bow wherever it wants to go, therefore it should be light, so that it has a greater ease of movement. The left arm delivers the hand wherever it must shift. The fingers of the hand cling to the string with a firm hold so that the string has a very well defined length. The fingers of the right hand also cling to the bow firmly; they must be sensitive to the feel of the string and sometimes they are used to produce a stroke by themselves and also aid in string crossings. KNUCKLE KNOCK: the knuckle knock is a "finger painting" kind of movement; it is a movement that is easy to do and teaches us how it should feel to play easily without being encumbered by having to play real notes correctly. As you move up and down the string, the hand knocks on the fingerboard; the hand is articulated at the wrist. This insures that the wrist will be flexible enough to give the player a beautiful vibrato or in the case of the right hand, an easy sautille. FLING PIZZICATO: In the fling pizzicato the fingers move down the length of the string (clinging to the inside of the string) just as it leaves the end of the finger board it plucks

the string and then continues in an oval follow through. This is done for both hands. It aids the left hand in shifting, making sure that the arm is carrying the fingers for a long shift and that the bow also is carried by the arm. The string is held with a cling and the arm can do an appropriate follow through. Done properly one can feel the arm's connection to the back on the follow through. BLOB PIZZICATO: This consists of making a blob of a hand and producing pizzicato notes randomly all over the cello. It teaches the hand to work together as a unit and it clings to the string to create the pitches. SLAP BASS: Slap bass is an action aimed at the flexibility and use of the elbow joint. As the forearm moves between the upper and lower registers, the elbow is used like a door hinge opening and closing and thus covering the distance of the whole cello. Similarly the forearm of the right arm opens and closes so that one can easily use the bow at the tip.

SWAN'S HEAD: Just as the Bear Hug helps us to position the cello, the Swan's Head helps us to balance the bow. Our thumb is underneath the bow; the bow is balanced on it and as the arm moves gracefully like a swan's head all the joints of the arm are movable. BABY CLUTCH: We hold the bow with a baby clutch: the fingers are firm but very flexible. The bass joints especially are very supple so that the hand can at once feel the vibrating string and also do any necessary articulation. The baby clutch also serves the left hand as it clings to the string, to create the pitches it uses the baby clutch to secure the string to the fingerboard. The base joints are again crucial for this task. All of the previous actions are designed to get the feel of the instrument without playing real music. They can also recapture the feeling of freedom in playing for the accomplished player.

Next we will explore more specific playing actions: CIRCLES: When we tried the Fling Pizzicato, our motion was somewhat circular. Most bow strokes have their circular components, even the smallest or shortest strokes. When we start a tone or finish a piece, our arm makes a circular motion. When we take a musical breath the bow is lifted in a circular fashion. This is not to say that the notes swell or necessarily have a diminuendo, it is merely the best way for the arm to move in conjunction with the bow. We insure that all the joints can move and the fingers can feel the string and intuitively deliver the right energy for the music at hand. NAMES: Musicians communicate. This is their main work. What better way to communicate at first than to say rhythm of one's name on the cello. Then Mom and Dad,

sisters and brothers, the cat and dog etc. In trying to communicate the names, one will not scratch or make a ghostly sound, rather it will be the start of a meaningful sound. We can then move to word rhythms of all kinds. "Wish I had a hot dog!" translates in musical terms to four 16ths and two staccato eighths. We can experience more complicated rhythms before we can negotiate the actual reading of them. We first apply them to learning how to activate the open strings and then later use them in music and practice them in our scale routines. We never stray too far from the idea, that cello playing is a communicating medium; then practicing becomes a time of discovery and creativity rather than an endless chore. SIRENS: The left hand can get into the act by playing all the notes that are available on each string. If we make a fist with our left hand and then release the fingers from the palm, we can take our hand and place it on the right side of the string. The thumb will also rest lightly on the string in an early thumb position. The fingers are clinging to the string as they always will when we are playing real music. Following this inside track of the string, the arm moves the fingers towards the end of the finger board and back again. The siren sound is more fun to listen to if we do a quasi-tremolo with the bow. This sometimes presents coordination problems for the very young cellist. Since they are holding the bow in an early bow hold at the balance point of the bow, the teacher could help the new cellist by climbing on the bow at the frog and helping with the feel of the tremolo. This same early tremolo produces ooohs and ahhhhs when an artist does this in the Rococo Variations of Tschaikowsky, it sounds difficult, but it is easy enough for a beginner to do. Conversely, the artist needs to remember to use the right things when he does this feat. Later on we will show you more tremolo glissandi, that use the same principles for thirds, sixths and octaves that are also easy to execute, but sound very demanding.

KNOWN TO UNKNOWN: Continuing our discovery process we explore making specific pitches other than just open strings. The D harmonic found at the midpoint of the D string is our first discovery for the left hand. If we take a measuring tape and measure the distance from the bridge to the nut and then take half of that distance we are at the location of D one octave above open D. We touch the string lightly with our third finger on the right side of the string; when we apply the bow to the string, the D sounds clearly and in tune. We will use this wonderful resonance to monitor our intonation forever more. After we have explored the harmonics at the midpoint of the string, on all of the strings, we will try matching the harmonic pitch with a

note on another string. For instance, if we go back to our D harmonic, we can match it by playing 4th finger on the A string. We listen first to the sound of the harmonic and this helps us to find the right spot when we are going to play the D on the A string We find the note with our blob of a hand which we used for the siren, but this time the thumb will be underneath the neck instead of riding on the string. We do not worry about the other fingers of the left hand. They are a part of the whole blob only the 4th finger is defining a definite pitch. As in the siren, the fingers are clinging to the string. They bring the string to the fingerboard instead of pushing it down. This is a very strong action (it is related to the bear hug that we started with). Not only is it strong but it also lets the hand retain its basic flexibility. All of the joints of the arm, hand and fingers are movable. When we push the string down, we must stabilize the joints and thus lose their great mobility. This will limit our expressiveness and our virtuosity. As we cling to the string, we listen for the answering resonance that we can hear, because both the A and D strings have matching D's which vibrate sympathetically with the D that we are producing on the A string. This is one of the best ways to monitor our intonation. The cello itself, when properly tuned can give us clues as to whether or not we are playing in tune. It is also good to try this 4th finger playing the note pizzicato at first. If it has a pleasant ring, we are playing correctly with the hand and fingers but if there is a thud instead of the nice ring, we aren't clinging enough with the fingers. We can then match the G string harmonic and also the C string harmonic. We can make a little ostinato bass as we alternate between the open string, the harmonic, and the open string and the 4th finger on the next string. If someone plays a little tune with us we are involved in our first chamber music.

BUILDING THE MAJOR SCALE: After matching the open string harmonics with our 4th finger on all strings, we are ready to play some other left hand notes. We can choose either the leading tone played by the 3rd finger or the minor third played by the 1st finger. If we choose the latter we can pretend we are calling someone- "Mommy", or "Daddy". Then we can add the leading tone or the 3rd finger. With this finger pattern 4310 on A and 4310 on D, we have a descending D scale. We can apply this fingering to the other two pairs of strings and we then have a G and C scale. We use the bow in our communicative way applying the rhythms that we learned in our exploration of the open strings. We have now entered a new world full of possibilities, we can play tunes and start to make real music.

Even as we are playing the many tunes that are possible in the first position, we begin to explore the keys (and colors) of tonal music. We start with the open string scales and then go on to discover all the keys and thus need to make use of such things as extensions (forward and backwards) and all kinds of shifting. We are still exploring the whole instrument as much as is possible and as soon as is possible. We are also changing the bowings and rhythms that we do with the scale. Any rhythm or bowing that is used in solo, chamber or symphonic music should be used in our daily scale practice.

Since we are building our left hand technique from our 4th finger to our 1st, our first scales will start from the top note and go down and then up to the top again. This helps balance the hand and shape the hand. There is always a feeling of clinging to the string, the arm delivers the hand to the correct spot and the finger clings to the string to produce the pitch. The cling is towards our own body, not towards our left elbow. The string is brought to the fingerboard not pushed there. However, we do not displace the string to the left; our fingers do not curl under the string, they use the string as a guide. The wrist is slightly lower, this makes the fingers easier to use: try clicking your fingers with your wrist raised, and now try it with your wrist lowered slightly, it is much easier the latter way. The base joints of your fingers should also remain flexible. These joints deliver the fingers, they need to be free to adjust in any way, therefore they should not be locked in any position, but remain in a neutral place that can be used in any way.

The scales that we explore first are D, G and C in one octave. Next we do these scales in two octaves, which requires some shifting and extensions. Now we add the F scale and introduce the B^{b} extension. If the base joint of the first finger is flexible, the extension is accomplished with no extraneous movement of the wrist or arm. We can helicopter the first finger and then it clings to the string in an elongated position. We add the two octave B^{b} and E^{b} scales. Now we are ready for the forward extension, which looks just the same as the backward extension, but is executed a little differently. It is as if the fingers and thumb shift one half step higher, leaving the first finger behind again in its elongated form. The trick here is to remember to slide the thumb as well. Here again there is no extraneous outward movement of the wrist The fourth finger is now able to play C# on the G string or F# on the C string. This is because we have shifted

forward with our second, third, and fourth fingers and thumb and created a space between the first and second fingers. Again because of the flexible base joint, it is not a stretch but a scissors like opening, that allows for a very large opening between the fingers. We now can include the D and A scale in our repertoire. These scales give us a variety of notes that we are familiar with, for our repertoire. We can do a multitude of rhythms by ear, that we will some day use in our repertoire. Also we can try many different bowings, that are found in the solo, chamber music and orchestral literature. These scales are all done by ear; the finger patterns are committed to memory, the attention can be given to the various aspects of playing such as tone, articulation, and the basic elements of posture and attachment to the instrument, that make artistic playing possible. The scales must be beautifully played so that they may become an integral part of our music making.

STRING CROSSINGS are a very important part of all playing. A good introduction to the actions, that should happen in good string crossings is to place the bow on the bridge itself and silently using the bridge as a guide feel what is necessary for the arm and hand to do in order to pass from one string to another. The bow must remain perpendicular to each string in turn for the best sound. The string is moving laterally from side to side and therefore should be pulled in the direction that we want it to go. The angle is different for each string. The frog of the bow is closer to us on the C string and further away from us on the A string. As we play, we must constantly be adjusting this playing angle depending on which string we are playing on. The wing of our arm goes out and in (towards us and away from us) not up and down--although the pitch looks higher on the page, we do not need to raise our arm to accomplish this pitch level. [Use the Otis piece to demonstrate an early version of this]. The fingers on the bow can also do the string crossings. We can hold the bow in the air and pull the first finger: the bow turns toward the A string. Then if we pull the bow towards us with the fourth finger, we are turned towards the A string. Between two strings we can shorten or elongate our fingers to simply and quickly accomplish the string crossing.

We can do dynamics on the cello from the earliest stages. First we should feel the inherent tension levels of the string. At the fingerboard the string has much less tension than at the bridge. There is more and more tension as we approach the bridge. The string works similarly to a bow and arrow. If you want the arrow

(or sound) to travel far, you must have more tension on the bow. If you expect less distance from the arrow (or sound), you need less tension. The speed of the bow must equal the speed of the string; therefore, the bow can travel faster nearer the fingerboard with less sound and slower at the bridge with more projection or intensity. A low pitch on a particular string is difficult to play close to the bridge, because the string is not moving fast enough and we must bow slowly for a viable sound. On the other hand, a higher pitch must be played closer to the bridge as the string is already moving faster. Sometimes we want a faster bow and we cannot play closer to the bridge. Then we can play in the middle of the string, where there is less tension and create more tension by using a scooping motion. Here we can create various tension levels while still encouraging the string to vibrate from right to left or left to right.

ONE FINGER SCALES have many wonderful functions: basic warm up for practice sessions or concerts; basic connections between the brain-ear and the fingertip; shifting; vibrato; singing sound. We start with three basic one-finger scales: 1st finger B^b, 2nd finger C, and 3rd finger D. Let's start with the 1st finger B^b scale. We start with B^b, because there are so many more resonant tones included in the scale, than the B scale has. The resonating notes are C, D, G and A. These notes are responded to by the other strings (they excite like overtones on these strings) which enhances the sound and lets us verify our intonation. We start with Down bow circles (like a crawl in swimming) and we add the old note, that we have just started with as a grace note to the next note. We are going from something we have established to a pitch yet to be discovered. If it has a note that will respond to it we can easily verify it, otherwise we must infer the correct pitch. We play one octave noting, that the third and fourth notes are a half step, and the seventh and eighth notes are a half step apart. We can feel these intervals with our arms -- the finger is in charge of playing the notes, but the arm provides the transportation. When we descend, we use an Up bow circle (like a back stroke in swimming) and we still have our grace note connection. Next ,we do legato bows and the grace notes become equal eighths with the new scale notes, we do not lift the bow. We can make a legato connection wonderful for singing passages; since we are shifting with the arm, we can hear the slide if we want it or we can do it without the noticeable shift, that we hear because of a jerky motion or because we are shifting with the finger. Next we add the "fill-ins". The "fill-ins" are the notes in each position that are in

the key of B♭. For this we use the flexibility of the left hand and fingers. The arm is still making the shift, but the fingers must adapt to play the required notes. The adaptation mostly takes place in the base joints of the hand. When looking at the playing hand, the base joints seem to be at the end of the hand, but if you feel for the joint, you will find the joint is really in the center of the hand. We play from this center. In order to achieve the various intervals within the hand, there must be considerable give in the base joints to achieve these notes in the most efficient manner. The base joints become like switches delivering the fingers and then turning them on and waiting patiently in a neutral gear, until they are needed again. There are millions of examples of one finger scales in music (demonstrate Brahms and Saint-Saens).

The 2nd finger C scale is handled in the same manner as above: here the resonant notes are C, D, E, G, A and B. Almost every pitches intonation can be verified. We do the Down bow circles, the Up bow circles, then the legato eighths, and finally the "fill-ins". These C major fill-ins are a turn as we would find in Mozart. Now the balance of our hand is on the 2nd finger and we play around it. This helps in such pieces as the Haydn C major concerto or the Saint-Saens concerto opening which can have such a tendency to be out of control ,if we are not well-balanced.

The 3rd finger D scale has more extensive fill-ins besides the usual 3rd finger scales with circles and played legato. First we do a legato scale up and then do the familiar Christmas carol "Joy to the World" on all of the eight tones of the scale down. This is one of our first thumb position studies. We choose "Joy to the World" ,because it is very familiar and will probably not be played out of tune. Then we extrapolate the perfect fourth from the beginning of the tune and play that after ascending again with the scale itself. The perfect fourth outlines the basic feeling of the thumb position (the relationship of the 3rd finger and the thumb in a perfect fourth). Next we come up again and this time descend with the octave (similar to the 4th except on the D string) and finally we use the fourth again, as we practice artificial harmonics descending first using the perfect fourth as a guide and then the harmonics directly. In the harmonics, the thumb creates the pitch and the 3rd finger touching lightly at the distance of a fourth divides the new string into fourths and gives us a pitch two octaves above the thumb (which gives an A scale). The artificial harmonics gives us proof that

we have a feeling for the basic thumb position, otherwise the harmonic does not speak.

The way the thumb functions is a direct outgrowth of the Bear Hug. Instead of "strengthening our thumb", we use our body to bring the thumb into the string. It can be best felt by first using the arm itself to hold the string down and then using the hand below the thumb and then the thumb itself with the higher string attaching itself near the upper joint of the thumb and the lower string adjacent to the nail. The thumb again is clinging to the string, not pushing it down. Another way to feel this is to make a light fist with the thumb against the hand, then with the other hand try to pull the thumb away from the hand, but do not allow it. The thumb feels quite easy, but cannot be brought away from the hand, unless we allow it to. Next we extrapolate the perfect fourth from the beginning of the tune and play that after ascending again with the scale itself. The perfect fourth outlines the basic feeling of the thumb position (the relationship of the 3rd finger and the thumb in a perfect fourth).

Now a few bowing tricks to learn. BEEPS: At first small rhythmic strokes get the best tone from the cello. Each small stroke has a distinct and clear sound. To extend the stroke, we can use the beeps -- a small stroke that engages the string and then stops it. We can start with two or three in each direction and then increase the number. Later on we will use this same technique for down bow and up bow staccato. The small size of the stroke insures that will have a clear sound. We can then join the strokes into a long tone with a vibrant sound in any part of the bow. X Marks the Spot: This is another device for being able to produce a clear sound anywhere along the bow. One pulls the bow a small way and then using the string as a fulcrum, moves the bow back and forth (towards you and away from you) this gives you the feel of the contact that is needed to activate the string. GRASSHOPPER: this is a fun but confusing bowing used in conjunction with scales. Before actually doing the true grasshopper bowing, we will try an easier version. Take a small bite with the bow at the frog, use a Down bow. Then take a small bite with the bow at the tip, use an Up bow. This is pretty easy and gives a good feeling for moving the bow from the frog to the tip and back. Now do a little harder trick: do an Up bow bite at the frog and travel to the tip via an arc and land before doing a down bow bite at the tip. This can be very confusing, but gives us the feeling of going from one end of the bow to the other with great poise, lightness, and clarity of tone.

FEELING NEED of BOW and STRING: this exercise gives you the feeling of what the body must do to get a clear sound on any string in any part of the bow. We use both hands for this on the bow. We do a small curvy bow stroke at the frog. We catch the bow with our other hand and move the bow hand away from the frog. We repeat this process until we arrive at the tip. The bow feels heavy at the tip with our right hand right there. This feeling is what the body must supply when we are bowing at the tip (for a clear and meaningful sound). Then while holding the bow with our left hand at the tip, we slide our right hand back to the frog and play an up bow. The sound is just what we want at any part of the bow: we know what it feels like to produce a sound at the tip or anywhere else. This also takes into account the various thicknesses and frequencies of the strings. because the body with the ear guiding it feels exactly what it needs to do.

SCOOPS: For sound production, we make use of the concept of scooping ice cream. The scooping motion is one, that can be used for producing various tension levels on the string. Without the scooping motion, we get the most intense sound near the bridge and the least close to the fingerboard. When we play low notes on a given string and want great intensity, we must bow very slowly close to the bridge. Sometimes we have a low frequency note, but we need to play it with a faster bow than we can use close to the bridge. Then we can make the sounding point back towards the fingerboard (say in the middle between the fingerboard and the bridge) and use the scooping motion as if we wanted a lot of ice cream. If we have our scoop in hand and push the scoop directly on to the ice cream as hard as we can, we do not get any ice cream no matter how hard we work. The same is true for sound: the harder we push the string the more it refuses to vibrate. It soon starts to squawk instead of vibrating. If, however we use a scooping motion according to the desired intensity, we achieve the intensity and at the same time excite the string.

While making music, we are forever making these choices. How much intensity do I want? Where can I play this note for the effect that I want? We choose the appropriate scoop level for whatever note duration we have. The finger can draw the scoop motion or the hand or the whole arm. This depends on the duration of the note or notes (if slurred).

Bounce, Bounce and Dribble: To become aware of some of the other attributes of the bow on the string, this is a fun exercise. Start with

the bow in a vertical position with the silver button of the bow perched on your knee. Lift the bow and drop the bow onto the middle of the string at the middle of the bow. Set up a rhythm "knee--bounce, knee--bounce" etc. Next do the same, but let the bow continue to the point, it will continue to bounce with smaller and quicker bounces (the dribble). This action will give the bow arm a feeling of lightness and aliveness, and also to make us aware of the capabilities of the bow.

String Crossing On Bridge: Place the bow on the bridge. Let it roll from the C string to the A string. Notice that your bowarm is not going up in space, rather it is closer to your body when you are on the C string and further away when you are on the A string. Perhaps we can substitute the words "out" and "in" for what we are feeling. Then when we are playing a piece of music, our bow arm will go in and out as we need the various strings in our playing. Even though the pitches are going up and down, our arm does not go up and down rather it goes closer and further from our body. We can use only our hand to turn the bow from the A to C or back again. When we are doing fast passages ,that require constant multi-string crossings, the hand can control and move the bow. The arm will respond but will not instigate the actions.

Elevator: This is an action, that shows how to use the arm in proportion when you are playing a whole bow. If you slowly raise the bow as if it were going up in an elevator, you feel its weightlessness and also, in order to keep the bow in a vertical path, your arm moves in just the right way.

Conversation with Irene Sharp

by Tim Finholt

Cellist Irene Sharp has been acclaimed internationally for her teaching. She has given master classes for American String Teachers Association (ASTA), European String Teachers Association, Australian String Teachers Association, and the Suzuki Association of America. Although based in Northern California, Ms. Sharp has worked with students in cities such as New York, London, Salzburg, Hamburg, Sydney, Tokyo, and Taipei. Currently on the faculty of the Mannes College of Music, she has also served on the faculty of the Meadowmount School for Strings, the Bowdoin (Maine) Summer Music Festival, and Indiana University's String Academy. Ms. Sharp is Artistic Director of California Summer Music, a festival for young string players, pianists, and composers ages 12 to 23 held at Pebble Beach, California. She has been an invited speaker at the national meetings of the Music Teachers' National Association and the Music Educators' National Conference, and has given numerous teacher workshops worldwide. In 1992, Ms. Sharp received an award for her teaching from ASTA. She collaborated with the late Margaret Rowell, and performed in Pablo Casals master class in Berkeley, California. In mid June 1998, Ms. Sharp will conduct the Irene Sharp Cello Seminar at Mannes College of Music.

TF: Do you think that it's crucial that a teacher be a good cellist in order to be good at teaching the cello?

IS: That depends on how you define "good." The most effective teaching is done by someone who is actively playing herself, because that's the way one learns. Technique isn't something that one can just learn and finish. It keeps growing as you use it over the years. I do think it's crucial that a teacher continues to practice and perform.

TF: Does one need to be a virtuoso in order to be a great teacher?

IS: No, but teachers need to know the technical and musical principles that create a virtuoso. You don't develop this understanding unless you're both an active musician and teacher of all levels of students.

TF: Do you think that there is such thing as a student with no talent for an instrument?

IS: No. If a student is able to speak and also has a desire to make music with a cello, that's all he or she needs. The ability to speak a language proves that they can already use their ear in a certain way.

TF: Do you think that there's such thing as a person with no sense of pulse?

IS: No. Pulse is a core part of our being. We all have a heartbeat, which we can sense going faster when we need more oxygen and going slower when we need less. We all live rhythmically, so I just build on that idea. I think that rhythm is more a matter of raising the student's awareness, rather than having talent. Everybody has an innate sense of pulse, whether they know it or not. Playing an independent part with another instrument from the earliest stages develops this skill.

TF: Let's say somebody comes to you who seems to struggle rhythmically. What do you do to help them? Are there exercises for this?

IS: There are many ways to go about it. I often discuss the mathematics of the rhythm so that they get an intellectual grasp of the note patterns, and I encourage students to listen to a recording of the piece so that they get a feel for the music. I also accompany students at the piano, which raises their awareness of the beat and helps them to control their rhythmic impulses..

Music is the best teacher available. The best exercise isn't going to give you the variety of rhythms that real pieces of music do. I think it's a matter of turning the student's ear on and ascertaining whether the student knows about note values. A sense of rhythm is a skill that can definitely be taught.

TF: Do you recommend any method books or do you have your own system?

IS: I usually start with an out-of-print book called "Pathways for Young Cellists," by Olga Stuart. It's similar to a beginning piano book in that there is very little information on each page, giving the student a sense of rapid progress. Then I go through a number of method and etude books: Feuillard Method for the Young Cellist, Kummer Method, Sevcik Opus 3 Bowing Exercises, Popper High School of Cello Playing, and Piatti Caprices.

TF: What do you like about the Feuillard?

IS: Feuillard shows the student a new position or technical problem and then provides a wonderful piece of music with which to practice it. This method book teaches everything from open strings to thumb position. It takes students a year or two to get through this book, after which they are familiar with the entire instrument.

Because Feuillard uses musical examples, the students develop their musicality along with their technique.

TF: What do you like about the Kummer method?

IS: Kummer is similar to Feuillard; however, he uses his own pleasant music with varied keys, rhythms and bowings to enhance playing and sight reading skills. Students enjoy it because it is musical and the examples are short. Kummer doesn't take an idea and run it into the ground.

TF: Why do you use the Popper Etudes?

IS: Popper was a genius! He composed just at the turn of the century when music was beginning to lose a clear sense of key. His etudes are so chromatic that even a person with a fantastic ear cannot sight-read them. They serve as a valuable bridge for the study of contemporary music. The etudes really force you to learn where the notes are on the cello, and are wonderful ear training studies for cellists. You can not rely solely on your musical memory to teach you the pitch patterns in the music, you must also figure out the intervals. The etudes engage the students' mind in a way that other etudes do not.

I teach around 30 of the 40 etudes, since some are not as musically satisfying as others. When I assign an etude for the next lesson, I make a video or audio recording for the student on the spot, so that they will have an idea how the etude sounds and this will save them from incorrect learning. This seems to work very well, since many of my students learn the etudes by the time they are 12 or 13 years old.

TF: You place a lot of emphasis upon repertoire in your teaching. Do you also encourage the students to play scales and other rote exercises?

IS: My students do a lot of scale work, using a myriad of bowings and styles that they will find in the repertoire. I have them playing three octave scales within the first six months of playing the cello, because I want them to deal with the whole cello instead of just staying in the lower positions, fearing the upper positions. I vary the bowings each week, adding arpeggios, thirds, and sixths after the first year or so. After four or five years, I ask my students to promise that they'll do scales every day, even though I may not hear them each week.

TF: What do you think of the method books commonly used in schools?

IS: I don't use them because I feel they are not geared to the needs of the cello. Cellists and violinists have different problems to solve. Although I think class teaching in schools motivates many students to play instruments, I also think that it takes

individual work geared to the individual talents of the student to develop players who will enjoy music for a lifetime.

TF: What do you think of the Suzuki school?

IS: I think it's great, if it is taught well. The principle of learning through one's ear is invaluable, especially for young children. My students always record their lessons and listen to great cellists playing their repertoire. Suzuki developed steps that allow a violinist to play progressive pieces of the violinists' repertoire. Although I certainly use the Suzuki principles, I do not use the repertoire as it is prescribed in the Suzuki method, I concentrate on educating the brain-ear and teach the reading of music from the earliest lessons.

TF: Some students learn quicker with an analytical approach, while others are more suited to a holistic approach. How do you adjust to these different learning styles?

IS: A teacher has to learn how to approach a problem from many different vantage points, since each student is unique. Some learn well visually and some aurally, and still others learn kinesthetically. It's part of the teacher's learning process to discover the strengths and weaknesses of each student and how best to help them as individuals.

TF: You are a vital link to the teachings of the great cello teacher, Margaret Rowell. She was known for using pictures of animals which illustrated certain key concepts of cello playing in her teaching. Do you have a picture of an eagle in your studio too?

IS: I definitely have my share of pictures and other objects, including a bird that has wings that flap by pulling a string. I also have a little toy bicycle that I carry around wherever I go to demonstrate how to set a string into motion.

TF: How does this work?

IS: Well, if you turn the bicycle upside down, you can spin the wheels with your finger. You use the fleshy part of the first finger of your right hand to make the wheel go "down bow," and your fingernail to make the wheel go "up bow." This helps give the student the feeling that they are moving the string at the actual point of bow contact, which helps focus their sound.

The bicycle analogy helps focus a student's attention on the key role of the fingers in setting the string in motion. There's a subtle finger motion in every bow stroke of a fine player, whether long or short bows, fast or slow bows, which is often neglected by players and teachers. If you only use your arm to set the bow in motion, you are using a very coarse motion, lacking in fine control, analogous to trying to write with a pencil that is tied to your elbow.

Most students are conscious of their contact with the wood of the bow, since that's what they are touching when they hold it, but they are less aware of how they are contacting the string with the bow hair. Many dwell upon their arm motion or arm weight, but lose sight of the fact that the bow is merely a tool to set the string in motion. Sometimes I have a student bow while holding the hair (which I wrap in a Kleenex so that it doesn't get oily) itself rather than the wood, so that they experience how the hair actually interacts with the string.

TF: Do you place much emphasis upon arm weight in your teaching?

IS: Not really. I don't talk about arm weight because I think the bow arm is for transportation, like legs are for walking. The legs feel light when you walk; the arms should feel light when you play the cello. This is where the analogy of the bird wings comes in to play, because it conjures up the image of lightness.

Instead of arm weight, I emphasize taking advantage of the various points of tension on a string. A string's tension varies depending upon which one is played, how close to the bridge it is bowed, and how high the left hand plays on the fingerboard. If the bow is closer to the fingerboard, the string doesn't have as much tension, so the sound has less projection. But if the bow is closer to the bridge, the string has more tension in it and the sound projects well.

Projection can also depend on the pitch of the note and the speed of the bow. For instance, for low-pitched notes to project, you can play close to the bridge with a slow bow. For high-pitched notes to project when your left hand is up high on the fingerboard, play close to the bridge with a fast bow.

So ultimately, one varies dynamics by changing the points of tension in the string. More tension can be created by using a "scooping" motion, like scooping ice cream. If one pushes down on the ice cream, which is what most people do to the cello, one can push with all one's might, but end up without much ice cream. A scooping motion that is shaped like a big smile, will result in more ice cream. When playing the cello, the player should not be pushing down on the string. In actuality, it is better to make it bulge down towards the cello top without directly pushing down on the string. For instance, on a down bow, you make a smiling (arc) shape to your right. Deeper arcs give you more sound and shallower ones give you less.

TF: Does this "scoop" (arc) manifest itself in the bow moving down towards the bridge and then coming back up?

IS: No. It is used to coax the string to vibrate.

TF: How is the "scoop" (arc) created, by using more pressure?

IS: No. "Pressure" is a dangerous word. The trouble with pressure is that the downward pressure exerted by the player actually inhibits the string's vibration.

TF: Is the "scoop" visible?

IS: No, it's not. To the listener it will look as if a straight bow was drawn, but to the player it is a tactile feeling.

It's hard to explain without showing it on the cello, but my approach takes advantage of the energy that is already present in the string, since it is already under tension by virtue of being strung up on the cello. For example, when you play close to the bridge, you hardly have to exert any energy to make a sound. The idea is to tap into the inherent properties of the string, matching the bow speed with the string's natural vibration, which varies depending on the tension point of the string.

TF: Does the left hand play a key role in sound production?

IS: It plays a very important role. Depending on one's left hand technique, the player can either deaden the string vibration and therefore the sound quality, or allow the string to vibrate more freely therefore increasing projection. If the left hand allows the string to vibrate freely, the bow can more easily do its job.

As with the bow, most people do the seemingly logical thing, which is to push the string down on the fingerboard. Unfortunately, this dulls the sound and locks the finger joints. If you push the string down you have neither flexibility nor speed, because you have to stiffen your joints.

My left hand approaches the "right side" of the string as if I were going to cling to a monkey bar. I pull the string to the fingerboard and towards the center of my body. My finger joints remain flexible even though I have the string down. If one does this efficiently, the string can vibrate freely and therefore enhance projection.

TF:. How do you teach vibrato? Many teachers struggle with this.

IS: Vibrato is the proof that the left hand is working properly. If the fingers cling to the string and the arm is light and can move easily, the vibrato will be artistic. My beginners do imaginary shifting all over the fingerboard. This is a vibrato exercise in disguise. I find if I can achieve a flexible left hand, then I really don't have to actively teach the vibrato, because it develops as a result of a balanced hand and arm. The left arm is in charge of shifting and vibrato (moving the fingers where they can operate). The fingers do not shift and conversely the arm does not hold the string down.

TF: Victor Sazer, author of New Directions in Cello Playing, advocates a way to hold the cello that is very different from the famous "bear hug" position advocated by Margaret Rowell and yourself, where the cellist must be able to hug the cello when sitting. The bear hug aligns the cello more with center of the body, whereas Victor Sazer advocates placing the cello significantly to the left. What do you think about his idea?

IS: . The "bear hug" automatically positions the cello in a way that feels comfortable for people of most shapes and sizes. It also gives you a sense of the energy that comes from the back, that one uses for playing.

TF: Students come in all personality types. Some are more introverted and some are more extroverted. Some are more analytical, and some are more intuitive in their approach. How do you, for example, bring out the personalities of the more introverted or analytical types?

IS: I try to help each student, no matter what personality type, to intuit what the composer had in mind, by talking about important chords or how moods are created by different note values and dynamics. I discuss the history of a work, like the Elgar concerto, describing what it tries to convey and what the time period was like in which it was written. Whether a person is an extrovert or an introvert, they become a part of the experience of making the piece theirs, and responding to it as they will. The cellist is like an actor who speaks the playwrights' words, presenting the "play" to the best of their ability. Everyone has internal experiences of many different kinds, so a teacher must try to tap into a student's own experience. In the Beethoven A Major Sonata, for instance, which I interpret as a very sunny work, I usually ask the student to visualize beautiful woods with the sun beaming through the trees. A teacher has to excite a student with an experience that they can relate to, regardless of personality type.

TF: Do you encourage your students to play in an orchestra while studying with you? Or do you think orchestral playing can lead to sloppy habits?

IS: I don't let a student audition for an orchestra until good playing habits are established. Sloppy habits sometimes creep in afterwards, but it is my job to catch and fix them. I enthusiastically encourage my students to play in an orchestra once they have sufficient technique. It's wonderful to be able to play a great symphony and to experience the music as part of a larger instrument, the orchestra. I also greatly encourage them to play chamber music.

TF: Do you tend to dictate musical interpretations, or do you give your students a lot of latitude?

IS: As a young teacher, I thought that if I taught the person the technical wherewithal to play a piece, they could automatically play it in a musical way. I have since discovered that this is not the case. People often don't listen to enough music, or don't go to enough live concerts, so they don't have enough exposure to the difficult language of music. Now I work through a piece and try to show them not how to do a phrase, but how to find a high point of a phrase, or how to find the emotional content of a certain section. If I am successful, they take off from there and do their own thing. But most need the initial guidance.

TF: How do you reveal the emotional depth of a work to a student who may not be able to relate to its emotional content due to lack of life experience or youth? For instance, how do you instill the emotional mood swings of a Beethoven sonata?

IS: Even the most immature student has had a myriad of emotions that they know very well. In fact, the older we get, the more we tend to hide our emotions, so the younger students have an emotional advantage in a way. I think success lies in helping the student access the emotions that are already within them.

TF: Do you encourage your students to listen to recordings?

IS: Yes. Definitely.

TF: And you're not concerned about them imitating the recording, rather than developing their own interpretation?

IS: Oh dear, wouldn't it be terrible if somebody came out sounding like Rostropovich or Casals?!

We learn many important things in life by imitation. For example, we learn to talk by listening to our parents and imitating them, but we don't put words together just like they do, we formulate our own ideas. Music is a language too, so I think imitation is an important step in the learning process. And why not see how great artists solved the same problems that we face? Besides, I think it's nearly impossible for a child to come out sounding like someone else. In my opinion, this issue is way overblown.

TF: What do you do when a child is forced to play the cello by their parents?

IS: I won't teach a child in this situation. My students need to demonstrate that they basically like to play the instrument, even though there may be times when they don't want to practice. I'm not looking for four and five year olds that have "talent," since I think everybody has talent. But if I sense that a child just hates playing, then I won't teach him or her.

A more difficult problem is when parents want to market their child. I have to treat this situation very carefully, since I see it as my role to nurture a child's pure love of music making, a goal that can conflict with the parents' ambitions.

TF: Do you encourage students to go into the music profession?

IS: That's not my job. My job is to make the most of the profound gift that parents give their children, the opportunity to learn to play an instrument and to make beautiful music. I hope that my students choose to make music a part of their lives, whether as a professional or as a devoted amateur. If a student wants to become a professional, I think that's great, and if they don't, that's fine too. I just know that music has been a wonderful gift in my life, and that I wouldn't give it up for anything.

INTRODUCTION -- Irene Sharp

Margaret Rowell's Teaching

In the fall of 1958, I performed the Brahms Clarinet Trio at Holy Names College in Oakland, California. At the end of the concert the pianist, Bernhard Abramowitsch, turned to me and said, "You play well, but I know a woman who could help you improve. She doesn't play the cello any longer, but she is an unbelievable teacher." My immediate reaction was negative. "A woman? And she doesn't play! How can she possibly teach?" However, I made an appointment with her, and thus met one of the most important people in my life--Margaret Rowell.

On my way to meet Margaret Rowell, I was nervous as I drove from the Albany flats to her beautiful house in the hills above Berkeley. How would I play? What was she like? I was met at the door by a gentleman wearing thick glasses, a green eyeshade, and an apron. He had a twinkle in his eye and he used language so beautifully that I was instantly charmed. This was Margaret's husband, Professor Ed Rowell. While I studied with Margaret, I would often come early to talk with Ed and learn from his wisdom and his genial wit.

As her husband ushered me in, Margaret came along in her warm, quick, enthusiastic manner. Her brown eyes flashed behind her glasses. With her short dark hair, her simple dress and artistic jewelry, she looked elegant. She shooed Ed back to finish the dishes, closed the French doors to the living room, settled on the blue couch, and waited for me to play.

I played the Prelude from the Third Bach Suite badly, although I played as well as I could. Years later, Margaret said that it was so bad that she couldn't tell whether I was musical at all. But, typically, Margaret recognized in me someone who needed help, not necessarily someone who had the potential to become a cellist, but someone with many cellistic problems and a desire to learn.

Margaret's specialty is to take someone whose talent is not so obvious and help him uncover and realize his potential. I have heard her say at so many workshops "I don't teach the cello, because the cello can't learn! I teach the human being." As I sat in her book-lined living room, I sensed the many other cellists who, like me, had come here with their aspirations, and learned not only cello playing but an approach to living.

Until I met Margaret I had experienced only traditional teaching. The teacher assigned an exercise or piece, and the student attempted to learn it. The material was supposed to accomplish the teaching. If the student didn't play well, he was simply not talented, and there was nothing to be done. A basic approach to the instrument was not taught. If the student was physically immobilized while playing, he was categorized as "tight" and that was that. In the lesson itself, the teacher sat behind his instrument and the student behind his. There was not physical interaction between them.

Margaret's lessons were an enigma to me. I was used to playing a piece, not worrying too much about the actual sound I produced or how it felt physically. I never realized that there was a connection between the two. However, in those first lessons I rarely played more than one line of music. Margaret believes in teaching "from the inside out." She wants you to feel what it is like to produce an expressive tone and a beautiful phrase, not just fit yourself to a prescribed position with the hope that things will come out sounding all right. In order to reach you internally, Margaret uses imagery and direct physical contact.

During the lessons, this imagery and absorption with kinesthetics took many forms. One day when I couldn't get the feel of the bow, Margaret said, "Think of a paint brush," and had me get up and pretend to be painting her wall. When she wanted a "poured tone" she took me to the kitchen to fill a pitcher and a cup so that I could get the actual feeling of pouring. When I insisted on gripping the three ounce bow in a deathlike grasp, Margaret got her most beautiful bone china tea cup and saucer and had me manipulate them up and down and around. "Was there any danger that you would drop them?" she asked. And so I realized the feeling of an easy clinging hold to the cup nothing like the vise-like grip that I had been using on the bow.

Margaret's repertoire was not limited to cups and saucers. She asked me whether my car had a gear shift or an automatic transmission. Then she showed me how the left hand on the cello should be shifted, as if the cellist had an automatic transmission: not with a jerk but with an easy fluid motion. To teach pronation (turning the arm toward the body), she took me to her door so that I could turn the doorknob. Then I had to demonstrate that turning the top of a jar gives a similar motion. This type of teaching was highly unusual!

Even more unusual was having Margaret pump my arm in every direction to see how stiff I was and to show me how to use my arm from my back. I crawled inside myself, hoping she would stop thumping me so we could go on and play a few more notes. Enough of this feeling stuff!

But there was more to come. In her efforts to have me feel how the power could come through from the back, she had me crash the heel of my hand on my thigh. I often walked out her front door with a few black and blue marks.

Margaret would also get me to feel her arms as she played some notes, but my fingers were blind. It took me years to "see" what she meant.

One day when I couldn't yet understand the feeling of power from my back. she encouraged me to get on the floor and crawl, feeling my weight come through my hands while still having the fingers free to move. Margaret tried this with quite a few students. Once at the San Francisco Conservatory, the President of the Conservatory had an important visitor who wanted to meet Margaret. When they arrived at her studio they found both Margaret and her student crawling on the floor. A fine how-doyou-do, and what great teaching!

However, the lessons were not all physical. There were poems and readings from Robert Frost, Omar Khayyam, and F. A. Alexander. She was fascinated with wildflowers; out came a book showing "fiddle ferns" and their similarity to the scrolls of stringed instruments. Throughout all of it was this magnetic, vibrant, energetic, enthusiastic person. Margaret has so much vitality, you know she has never lost the childlike curiosity and energy that every adult longingly remembers.

One of Margaret's favorite quotations is from Saint Exupery's Wind, Sand and Stars: "Have you ever thought...about whatever man builds...all his calculations...all the nights spent over working drafts and blueprints, invariably culminate in the production of a thing whose sole and guiding principle is the ultimate principle of simplicity? It is as if there were a natural law which ordained that to achieve this end, to refine the curve of piece of furniture...or the fuselage of an airplane, until gradually it partakes of the elementary purity of the curve of the human breast...there must be experimentations of several generations of craftsmen. In any thing at all, perfection is finally attained not when there is no longer anything to add, but when there is no longer anything to take away...."

In her teaching, Margaret applies the principle of simplicity by using "one finger scales." This consists of playing a scale on one string with the same finger playing each of the notes. This, she believes, gives one a direct message from the brain-ear telling the finger exactly what is needed; the finger responds without interference. Often, as I was waiting for my lesson, I would hear the previous student playing a one finger scale. This happened over a period of months. I thought to myself this student must be slow, or perhaps Margaret's teaching is slow. Finally, at one lesson, I heard the Haydn D major

Cello Concerto flowing beautifully from the next room. This concerto is to a cellist what Mount Everest is to a mountain climber. What Margaret and her student had accomplished with one finger scales was to have so simplified the technique- achieving a beautiful tone, shiftings intonation, and all the other fundamentals- that climbing the Mount Everest of cello literature was relatively easy as a result.

Studying with Margaret also meant participating in her California Cello Club. This club evolved from her students meeting to play for each other and in ensembles. It grew to include all the Bay Area cello teachers and their Students. The Cello Club became a forum for visiting cellists. There were Countless occasions when Margaret hosted Piatigorsky, Rostropovich, Starker, Casals, Greenhouse, and other famous cellists. Cello Clubbers could get a closer view of an artist,
and the great cellists became aware of the cello community in the Bay Area, a community which existed because of the spirit and artistry of this one woman. In 1958 Rostropovich visited the University of California at Berkeley, and Cello Club attended the concert in the gymnasium in full force. After the concert the University and Cello Club cohosted a reception at which there just happened to be eight cellists with their cellos and the music to the Villa-Lobos Bachianas Brasileiras. Of course, Rostropovich participated in the impromptu concert after the concert memorable occasion for all.

Cello Club had wonderful Christmas get-togethers. In ensemble, forty or fifty cellists played the familiar Christmas carols. A teenager played "O Holy Night." The youngest cellist played "Between the Ox and the Grey Ass," an ancient carol. There one experienced the true Christmas feeling, with Margaret bustling about fixing punch and hundreds of brownies and arranging the greenery and holly so that it looked just right. No one who participated could ever forget these occasions.

Margaret is somewhat of an absent-minded professor. Sentences sometimes don't get finished, keys disappear, her purse all fifty pounds of it- can't be found, the book with the quotation that she needs isn't where it is supposed to be. Her forgetfulness sometimes takes unexpected turns, as it did that first Christmas I knew her. One evening before Christmas I arrived at our apartment to find a book on Beethoven waiting for me from Margaret with the message, "Merry Christmas!" A few days later there was another package containing a bone china sugar and creamer set--"Merry Christmas from Ed and Margaret!" When we arrived at the Rowell's for Christmas dinner, Margaret was all apologies. "Oh, I forgot your Christmas present!" and she presented me with a beautifully wrapped Alexanian edition of the Bach Cello Suites. She had forgotten all the previous gifts. I was overwhelmed.

Pablo Casals came to Berkeley in 1960 for a month-long master class. Margaret had many former and present students in the class, and she worked tirelessly to get us ready to play for the great cellist. It was the experience of a lifetime. Cello Club had a potluck dinner for Casals, and we had over eighty cellists playing together in his honor. After the month of Casals was over, I called Margaret for a lesson. She said, "You don't want to study with me after having been in the master class, do you?" I had never realized that Margaret did not hold on to her students. If she felt they needed something that she couldn't give, she would send them to someone else. This is most unusual in a world of teachers where each feels that he is the only one who can do the job well.

Margaret's teaching is in a continual state of change. She is forever learning and simplifying; asking questions of students, artists, physicians, chemists; reading, and writing to people all over the world. Margaret often states in her lectures that our cellistic geniuses are largely self taught. We don't remember the names of the teachers of Casals and Rostropovich. The reason for this is that in their quest for expression through their instruments these "greats" chose all the right paths. They were able to play well because there was no interference between their thought processes and the physical execution of these desires. They play "from the inside out" and it looks easy. Margaret, through her inquisitiveness, great warmth, and hospitality, is able to observe these great artists. She attempts to understand their techniques and to transmit this knowledge to her students.

Because of my husband's military commitment, we left Berkeley in January, 1961, and drove with our seven-month-old baby, Wendy, to Anniston, Alabama. There we rented half of a farmhouse, and Wendy and I talked to the cows while Terry went on all night field maneuvers. This is when Margaret r S teaching began to unfold within me.

There were many facets of Margaret's teaching that-I could not understand. She had talked about the reservoir of power in the back, ready to be used whenever it was needed by the hands. She had talked about playing through the fingers, not with the fingers. One was supposed to cling to the fingerboard and to the bow with a suction grip, like a baby clutching a toy. I was to use a bear hug to hold and position the instrument, and I was to feel that my arms were bird wings, light and airy, but powerful.

One by one, I worked through the concepts that she had delivered to me. I began to understand the basic approach to the cello: to free myself so that I could produce music. I realized again the magic of her teaching. It does not always produce immediate results, but, like time-release capsules, her teaching

keeps acting over an extended period. Although I had only studied with Margaret for a short time, during the three years when I lived in Alabama and Washington, D.C., I felt as if I were having a lesson with her every day. As I began to comprehend her teaching, I would occasionally write to Margaret and explain to her what she had tried to explain to me. Her invariable response was, "But of course, Renie!"

We returned to California in July, 1964, with two daughters. I was eager to see Margaret and to start teaching once more. From time to time I went to play for Margaret, but more often I would go to her and say, "Margaret, I have a student with such and such a problem. What should I do? What material should I use?" I loved teaching cello. Every student was unique and needed a different approach, but the principles were the same and had to be taught. Margaret has always had a great commitment to educate teachers. She feels it is the teachers who need to be instilled with the basic principles so that they can pass them on to their students. We had many wonderful exchanges where I tried out my new ideas on Margaret, and she shared her greater wisdom and ever-evolving ideas with me.

Music In the spring of 1968 Margaret delivered a talk in Seattle for the large Educators National Conference held there. Margaret rehearsed her talk many times beforehand, trying to be as succinct as possible. She asked me to come along to assist her, mainly to accompany four thirteen-year-old boys who played the Haydn C major Concerto in unison, as well as to illustrate her teaching points. In the large audience was Paul Rolland of the University of Illinois. Paul had a grant from the Department of Health, Education and Welfare during the Johnson administration, and he was producing a string method which included a book, films and new music. Later, Paul said he was intrigued that his violinistic ideas were so similar to Margaret's cellistic ideas, even though they had never met or talked. He invited Margaret to write the cello portion of his method. Margaret agreed and entered what turned out to be a frustrating period of authorship, trying to fit her choice of words into the Rolland method. The photographs were difficult to get just right, and the sequence of techniques had to be exactly the same as for the violinists.

Margaret sent the proofs of the book to me in Ann Arbor where we had moved in 1969. Then came a phone call that she was going to have a cancer operation, but I wasn't to worry. Margaret wrote the preface to the Prelude to String Playing while in the hospital. I marveled at the spirit of the woman who could concentrate on something that she loved at a time of great stress.

Paul Rolland asked Margaret to demonstrate her ideas in an American String Teachers Association Workshop in Milwaukee. Margaret again invited me

to come along to assist. Actually, she did not need any assistance. She was giving me an opportunity to learn how to teach teachers. When we arrived in Milwaukee, we first took a limousine from the airport and were dropped off in front of a hotel. Our baggage sat on the lawn- suitcases, cello, music cases. A taxi showed up to take us to the university. Margaret, gregarious as ever, engaged in a lively discussion with the driver, a university graduate, about books and architecture. When we arrived at the university I had my cello, suitcase, and music, but in the heat of the discussion we had left Margaret's things on the lawn in front of the hotel. I felt utterly useless. I had come along to carry things and to help remember, and had failed at the first opportunity.

We gave four workshops in Milwaukee with Paul Rolland between 1972 and 1976 and since then have given them all over the U.S. and Europe. A workshop is basically divided into three sections. In the first we discuss the basic approach to the instrument. The second consists of a typical master class in which a student plays a work and is helped in front of the entire class. In the third we prepare several pieces to be played by the whole group in a program at the end of the workshop.

Margaret prepared for each workshop as if it were the first she has ever given. She has copious notes from all the lectures she has delivered, and she uses them. However, each lecture is different. Her preparation is similar to that of an artist giving a concert. Although he has played the pieces many times, he must reconsider all the possibilities of each work and approach the composition as if it were the first time.

Margaret's vast knowledge of music and cello playing has come from many Sources, but she has integrated it with her own wonderful, characteristic insights. As Margaret guides teachers through her basic principles, one realizes that she has taught many children and has retained within herself the imagery that inspires children and adults. Her gift is the creative teaching that allows learning to happen from the inside out.

The teachers learn about bear hugs and bird wings and make their hands become "blobs." They cling to the string and bow with their baby clutches and again get the feeling of flying over the instrument with their wing feathers (fingers). They do "knuckle knocks", thumping the cello with their knuckles to feel the easy power coming through, then clap all over the fingerboard to feel the mobility of the arm. They learn about balancing on the string like a tightrope walker and that vibrato is like the wavering of the acrobat as he maintains his balance. These concepts are illustrated with newspaper clippings of the Great Walenska walking a tight rope from building to building. Margaret brings a picture of a skeleton to show the similarities in the construction of

arms and legs, and shows how the feet have their reflexes built into them but the hands work only through the brain.

She also has a "bag of tricks" Which she uses to illustrate points: a lizard with flexible "fingers" and rubbery feel that demonstrates suction into the string; Chinese handcuffs, again for a suction feel; a wind-up toy, wound up in the back to demonstrate where the power is. Margaret is not teaching dry notes and rhythms, but inner feelings and concepts which will enable live tones and rhythms to be produced.

Margaret is also willing to give each person the "feel" of her baby clutch or bear hug. Using the power from her back, she has been known to fling an unsuspecting student across the room with a mere flick of her arm. She challenges a teacher to take a book out of her hand, but the teacher finds this impossible because of the strength in Margaret's flexible grip.

In the master class phase of the workshop, one realizes that Margaret's approach is not just physical, but deeply musical. She wants the music to have shape and direction. She often talks about the architecture of music indeed that architecture is frozen music. One of her most scathing comments to a student would be, "It sounds too technical." Margaret wants Bach to sound like Bach, Beethoven like Beethoven, etc. She does not hand out "her" fingerings and bowings to works as 80 many teachers do. Rather, she works with each student to fit the technique to his concept of the music.

Margaret has the utmost patience when it comes to teaching. She will try multiple approaches over a long period of time in order to get a student over a musical hump. At these workshops it is clear that Margaret is not only interested in the most talented students. It makes no difference whether they are aged seven or seventy, amateur or professional, farmer or nun. The ones with problems receive the most attention. Margaret's interest is in the development of human potential.

Group playing in workshops and Cello Club was an unusual facet of Margaret's teaching. Cellists are by nature friendly, and since the cello has nearly the same range as a human choir, a cello choir has a glorious sound. Cello Clubbers love to sit down and play Bach Chorales together or arrangements of other great pieces. At a workshop many participants are moved to tears when they are in the midst of this beautiful sound. We had to limit the cello orchestra to ninety players at Margaret's 80th birthday celebration at the San Francisco Conservatory. Playing in such a group gave the whole community a feeling for the enhancement of the individual and his part in a greater whole.

Margaret and I have taught workshops in many places, each with its own special memories. We study maps on the airplane and discuss the spots we want to be sure to see. Margaret wants to experience everything. One year we were in Lexington, Kentucky. We finished the workshop and rose early on Sunday morning to watch the thoroughbred race horses go through their warm-ups. "Look at those delicate legs that carry the ton of flesh. They're always ready to take the weight just like our fingers in playing the cello." Then there was the Chicago trip when we had to see the wonderful lines of the Mary Cassatt paintings in the Art Institute, and Margaret's beloved water lilies by Monet.

Our trip to England, the first for both of us, was full of wonder. Under the expert guidance of my husband, Terry, we visited everywhere in London using the underground. Margaret was fascinated by the underground and kept asking whether they had dug it from the surface or had tunneled through when it was built. Neither of us knew, but Margaret was persistent. Finally, in desperation, she spotted a "typically English" little old lady with hat, gloves, and shopping basket. Margaret rushed over and asked her the burning question, "Did they go straight down or sideways to dig the underground?" The lady looked at Margaret and blurted out in a thick Yiddish accent, "I vuden't know. I hev only been here a short time meinself."

On that same trip for the European String Teachers Association, the workshop in Cambridge included a Beethoven Sonata cycle, and I performed three of the Cello Sonatas. As I was rehearsing in the concert hall Margaret stopped by to listen. She could not contain herself. "Your bowing is awful in that spot, Renie!" She grabbed my arm and vigorously demonstrated the proper approach. Other faculty members wandered in to watch the teaching demonstration. I was mortified; I was supposed to play in two hours and was being shown how to do a bowing. However, at the performance I discovered how right Margaret had been. I marveled again at the teaching genius who could not bear to see a wrong action being taken when she had the ability to correct it.

Margaret is forever lending her music, cellos, bows, and books to people and then forgetting who has what. On one occasion before a performance, she complained about the sound of my A string. I went home discouraged. What could I do? A few hours later a call came from Margaret. "There's a cello of mine in San Jose. Pick it up and see whether it doesn't sound better." It was beautiful, and I have enjoyed it ever since.

During one of our many hours of preparation for a workshop, I left Margaret a pamphlet written by a neurologist whom I had heard speak on Neurological Clues to Better Teaching of Music." I knew that Margaret was fascinated by the study of the mysteries of the brain and had read a great deal

on the subject- I thought that this pamphlet would also interest her. I left it on top of her piano which was already covered with music, books, and magazines.

On our next trip, to Columbus, Ohio, Margaret said, "Renie, I have something that you will enjoy reading. I'll just put my name on it so you can return it to me sometime. Out came the neurological pamphlet signed Margaret Rowell. I protested, "But Margaret, I loaned that to you." We had a good laugh. 'Well, it's too bad that I signed it," she said. "I'll replace your copy."

Sure enough, in a few weeks she had a copy for me. However, she had not simply written the author and asked for a reprint. She had gone out of her way to meet the gentleman and had begun an exchange of ideas with him. He was interested in her work, and she wanted to discuss his ideas with him. Her magnetism, interest, and curiosity had worked again.

Margaret has students everywhere. My students, Margaret's grandstudents, love to have her come to our Sunday morning workshops. She imparts such a feeling of history, love, ant sensitivity, and does it with such a flow of energy, that we all come away inspired. From her presence one gets a sense of a pebble thrown into a pool of water with widening circles flowing out from the center. Each person she has touched knows that he has had an extraordinary experience.

Irene Sharp
January 1984
Palo Alto, California

Technique

TECHNIQUE

Descending one-octave scales
D, G, C (Suzuki rhythms)

Ascending and descending one-octave scales
D, G, C (Suzuki rhythms)

Two-octave scales
C, G, F, Bb, D, A, Eb (rhythms and bowings)

One-finger scales
1. Bb; 2. C; 3. D.

⊓, V circles; ⊓, V fill-ins (much later)

Three-octave scales
Major - circle of fifths (all bowings and rhythms)

G major sixths
D(A) 2 3 3 2 ‖
G(D) 1 1 1 1 ‖

Cadence 1 4 2 1 B Bb B B C C C# C# D D D# Eb E
4 3 3 4 G G G G# Ab A A A# Bb B B C C

Thirds, sixths, octaves
Q 3 3 4 3
2 2 1 3 Q
} glissandos, tremolo

Gary Karr - shifting Bb: 1-1, 1-2, 1-3, 1-4
C : 2-1, 2-2, 2-3, 2-4
D : 3-1, 3-2, 3-3, 3-4
one octave, two octaves, A-string copy to D-string

F major sixths
A 3 3 3 3 ‖
D 2 1 1 2 ‖

Add-A-Note scales

Minor scales: Introduce three forms of minor, then use melodic form. Always include one octave of relative major.

Arpeggios

MAJOR AND MINOR SCALE AND ARPEGGIO FINGERINGS

SCALES	ARPEGGIOS
C MAJOR	
0134 013401240124-124-123-12-12-123 C G D A	0304142-14-13-13
G MAJOR	
013401340124-134-12-12-123 G D A	030414-13-13
D MAJOR	
1x2401x2401340134-13-12-123-12-12-123 C G D A	1x410304-13-13-13
A MAJOR	
1x2401x24013-13-123-12-12-123 G D A	1x410-14-13-13
E MAJOR	
1x24-1x24-124-124-134-12-12-123 C G D A	4142-142-13-13-13
B MAJOR	
1x24-1x24-124-124-123-12-12-123 G D A	4142-14-13-13
F# MAJOR	
1x24-1x24-124-124-134-12-12-123 C G D A	4142-14-13-13
C# MAJOR	
1x24-1x24-124-124-134-13-12-123-12-12-123 C G D A	1x41-4142-14-13-13
Ab MAJOR	
1x24-1x24-124-124-134-12-12-123 G D A	1x41-414-13-13
Eb MAJOR	
2401x2401x2-124-134-12-12-123 C G D A	202x1-142-13-13-13
Bb MAJOR	
2401x2401x2-124-123-12-12-123 G D A	202x1-14-13-13
F MAJOR	
40124012401x2-134-12-12-123 CG D A	4142-142-13-13=13

A MINOR
13401x24012-13-123-12-12-123 1410-14-13-13
G D A
321-21-21-321-31-2104210431
A D G
E MINOR
134-1x24-124-1x24-134-12-12-123 141-4x142-13-13-13
C G D A
321-21-21-42x1-42x1-310431-431
A D G C
B MINOR
134-1x24-124-1x24-123-12-12-123 141-4x14-13-13
G D A
321-21-21-321-42x1-310-431-431
A D G
F# MINOR
134-1x24-124-013-134-12-12-123 4x14202-13-13
C G D A
321-21-21-42X1-31042X1-431-431
A D G C
C# MINOR
134-1x24-124-1X24-134-12-12-123-12-12-123 141-4142-
C G D A 14-13-13
321-21-21-321-21-21-31042x1-42x1-431-431
A D G C
G# MINOR
134-1x24-124-1x24-134-12-12-123 141-4x14-13-13
G D A
321-21-21-42x1-42x1-42x1-431-431
A D G
D#MINOR
134-1x24-124-1x24-134-12-12-123 141-4x142-13-13-13
C G D A
321-21-21-42x1-42x1-42X1-431-431
A D G C
Bb MINOR
134-1x24-124-1x24-123-12-12-123 141-4x14-13-13
G D A
321-21-21-321-42x1-42x1-431-431
A D G

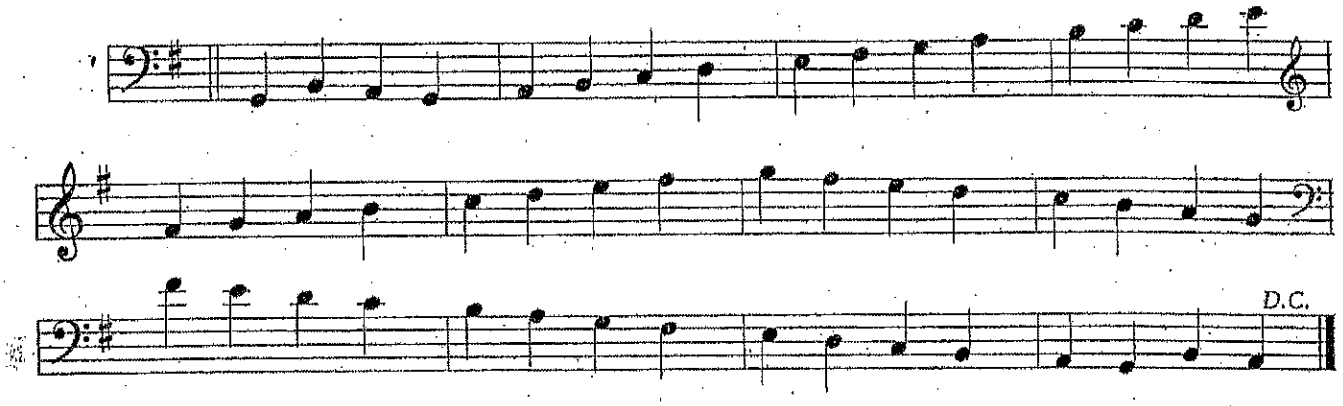
F MINOR
134-1x24-124-1x24-134-12-12-123 4x142-x142-13-13-13
C G D A
321-21-21-42X1-42x1-42x1-431-431
A D G C

C MINOR
0124013401x24-134-12-12-123-12-12-123 02041x42-1x4-13-
C G D A 13
321-21-21-321-21-21-42x1-42x1042x104210
A D G C

G MINOR
0124013401x24-134-12-12-123 02041x4-13-13
G D A
321-21-21-42x1-42x1042x104210
A D G

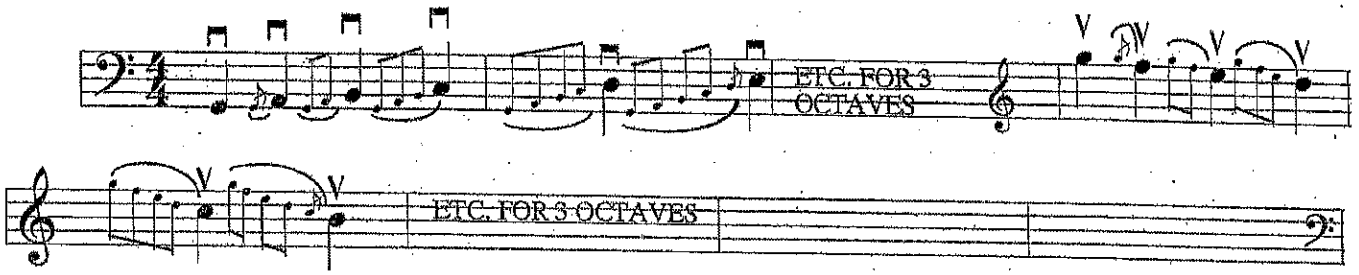
D MINOR
13401x2401240134-12-12-123-12-12-123 1410204-13-13-13
C G D A
321-21-21-321-21-21-42x1042104210431
A D G C

GALAMIAN SCALE ROUTINE

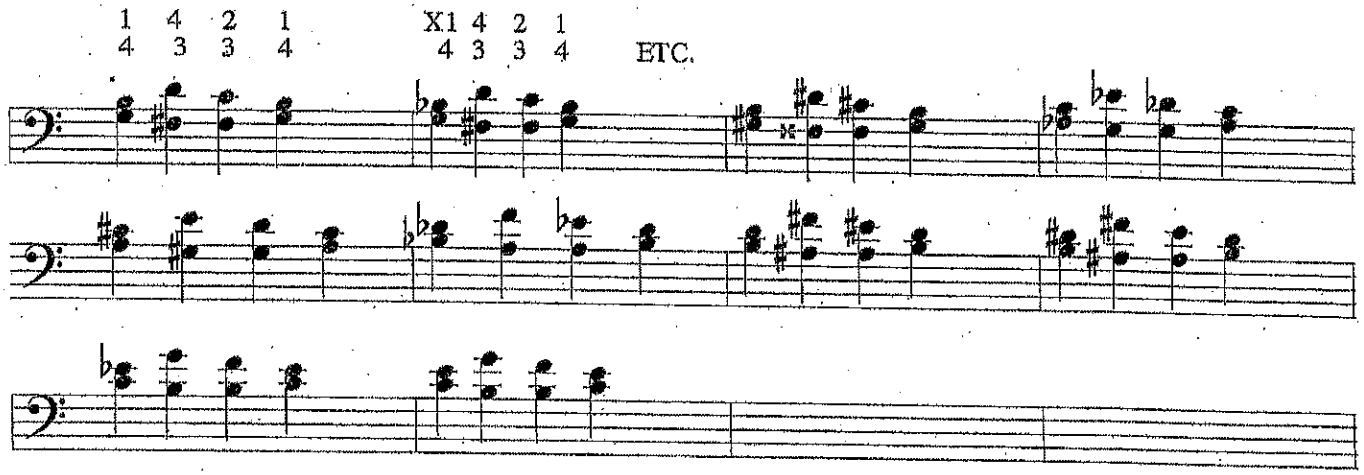


1.Slur: first do 4 slurred for the whole scale then do the same slurring 6,8,12 and 24 respectively. Keep the same beat throughout: 2 to a beat then 3,4,6,and 8. The notes get progressively faster.
2. Separate: do whole scale with separate bows. First emphasize 2 to a beat then3,4,6 and 8. Keep the same beat throughout.
3. Mixed: Do the whole scale with 2 slurred and 2 separate giving a full bow to the slur and a half a bow to the separate bows. Then do 3 slurred and 3 separate using the same full bow for the slur and the half bow for the separate. Lift the last up bow off the string and replace the bow at the frog as you have a half of a bow you haven't used. Then proceed to 4 slurred and 4 separate, 6 and 6, and 8 and 8. The 8 and 8 ends up bow so you do this again directly and it ends down bow.
4.Separate spiccato: same as separate only spiccato
5. Slurred staccato: Do whole scale doing 2 slurred staccato both down and up bow. Then do 3 each direction 4,6, and 8. Keep the same beat. The notes get faster at the start of each succeeding bowing.

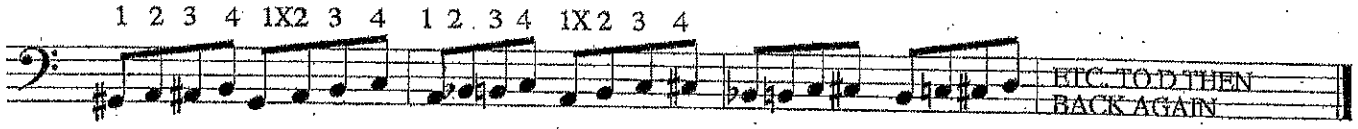
ADD-A-NOTE SCALE USE DOWN BOW AND UP BOW
CIRCLES



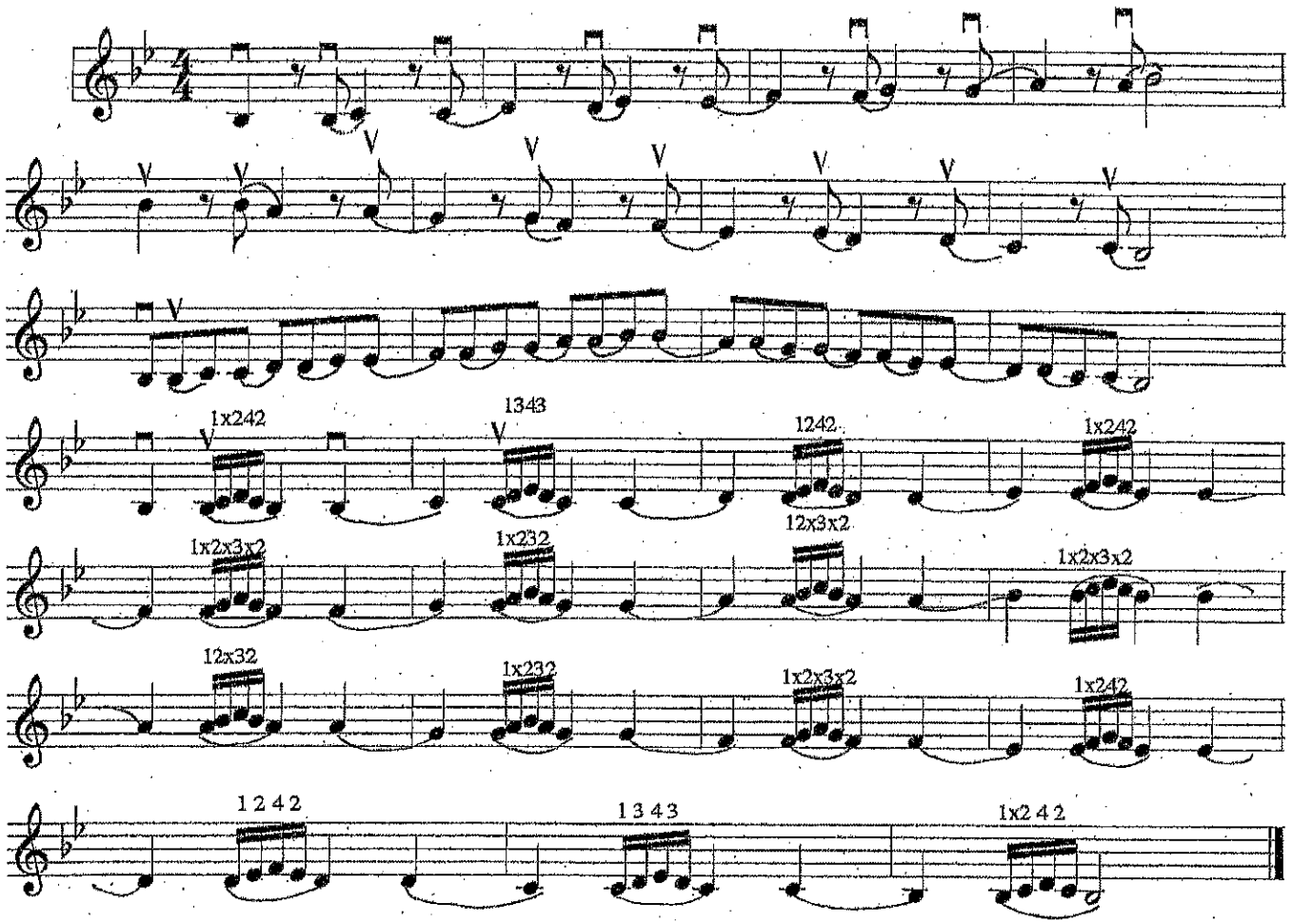
ROWELL POSITION OR CADENCE



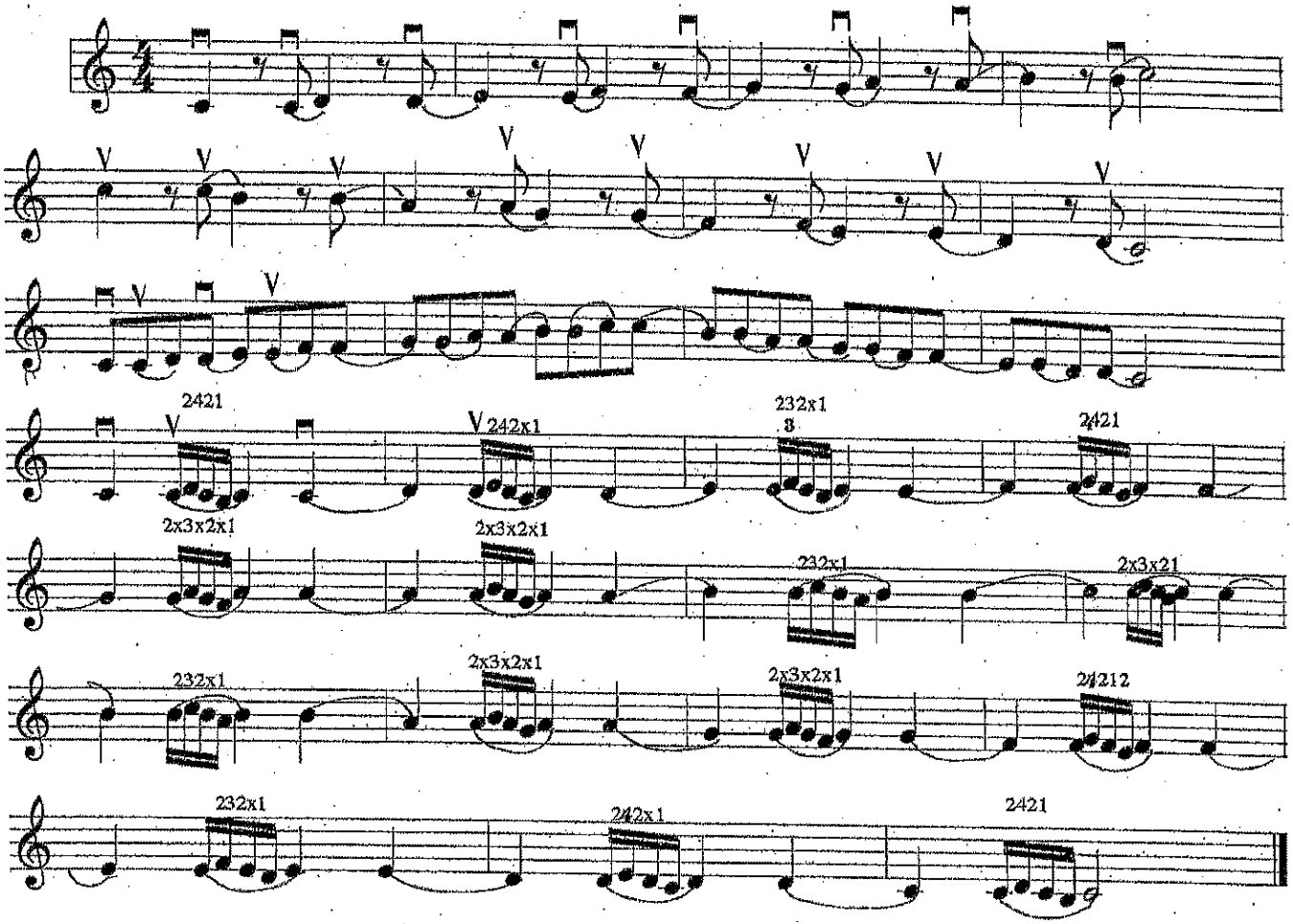
INCHWORM



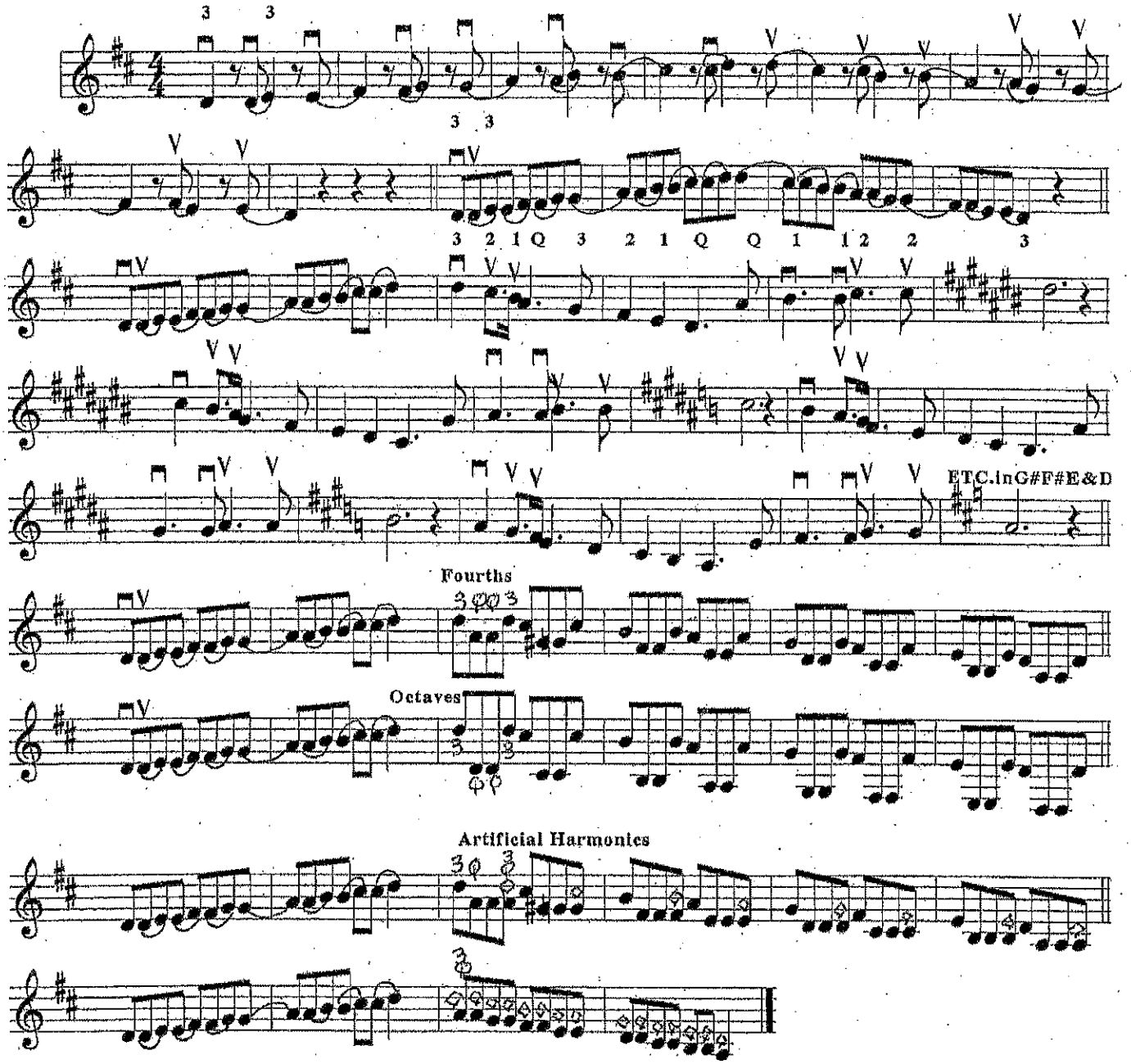
FIRST FINGER Bb Scale



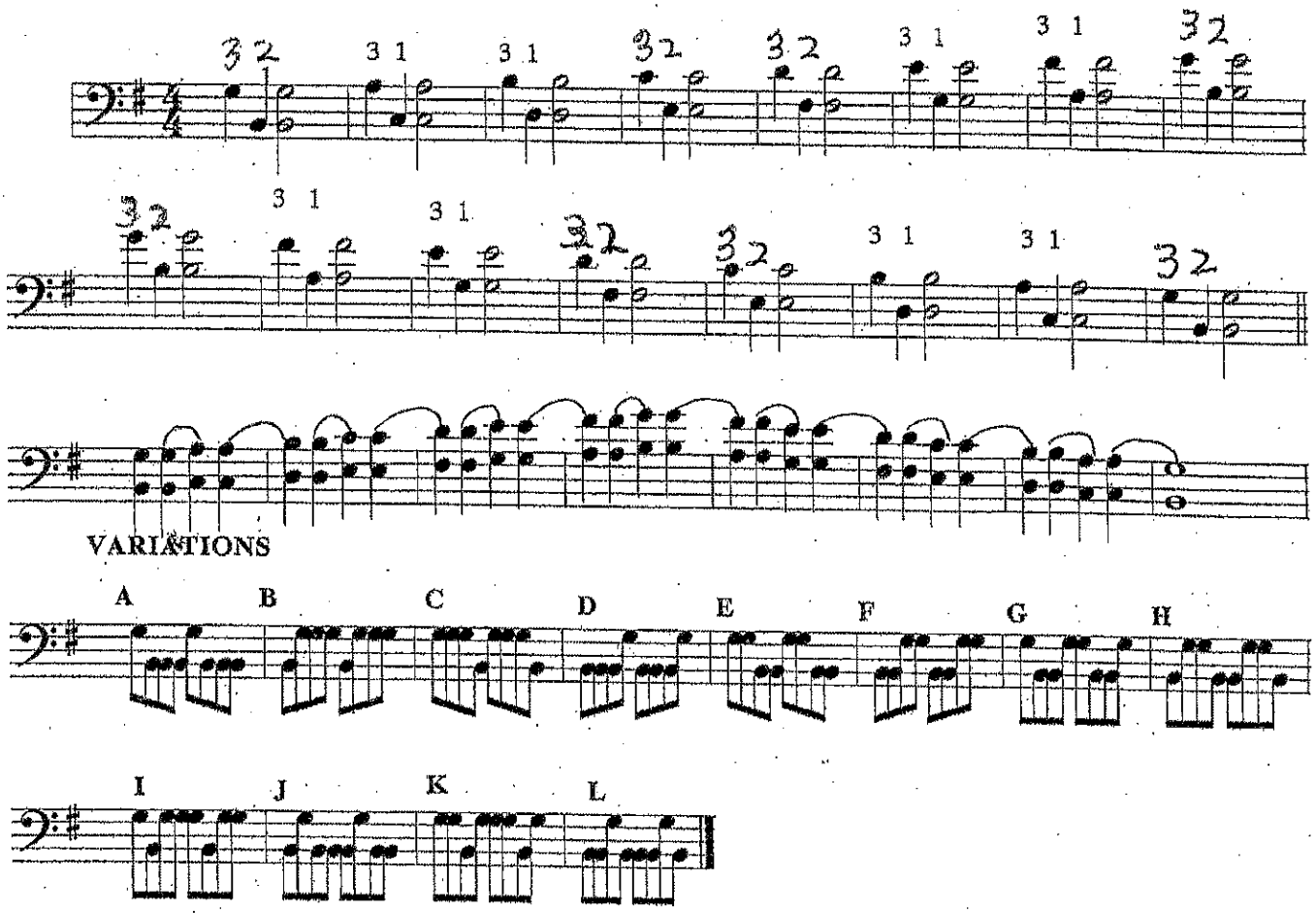
2nd FINGER C SCALE



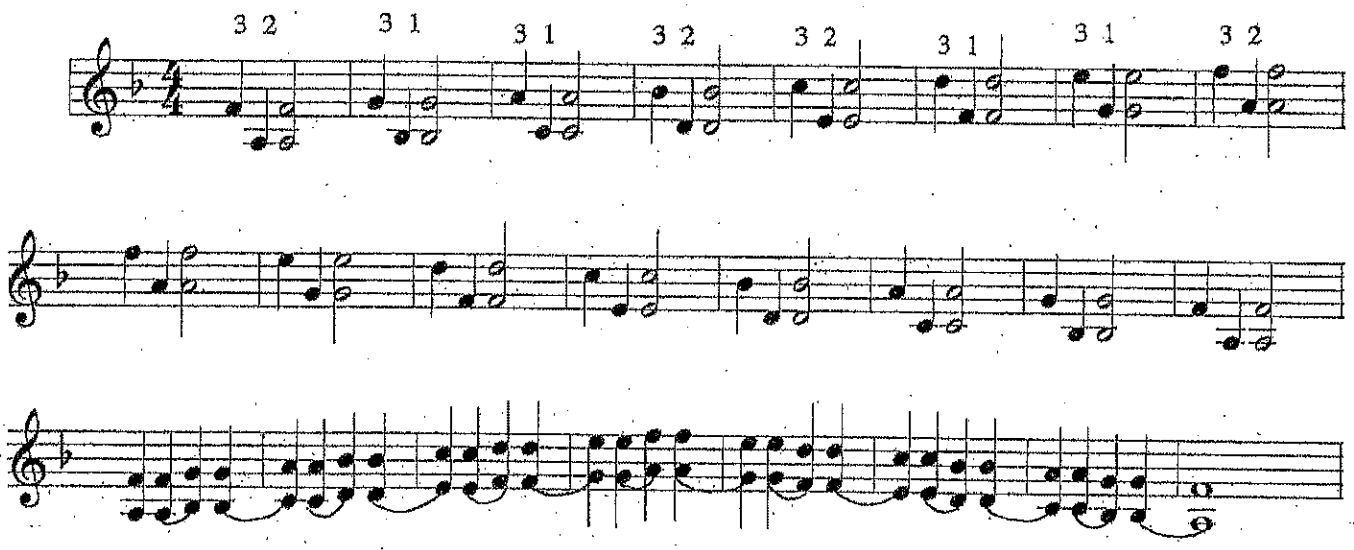
Third Finger D Scale with Joy to the World
Fourths, Octaves and Artificial Harmonics



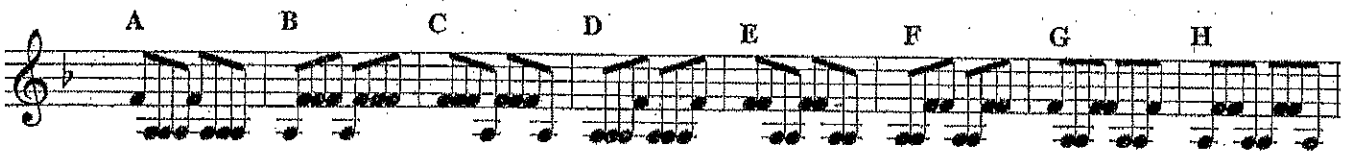
G Major Sixths

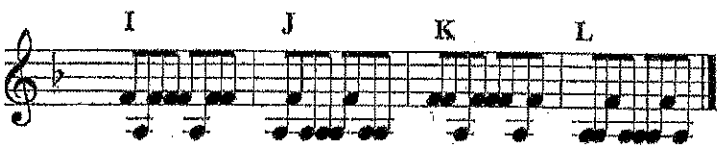


F MAJOR SIXTHS



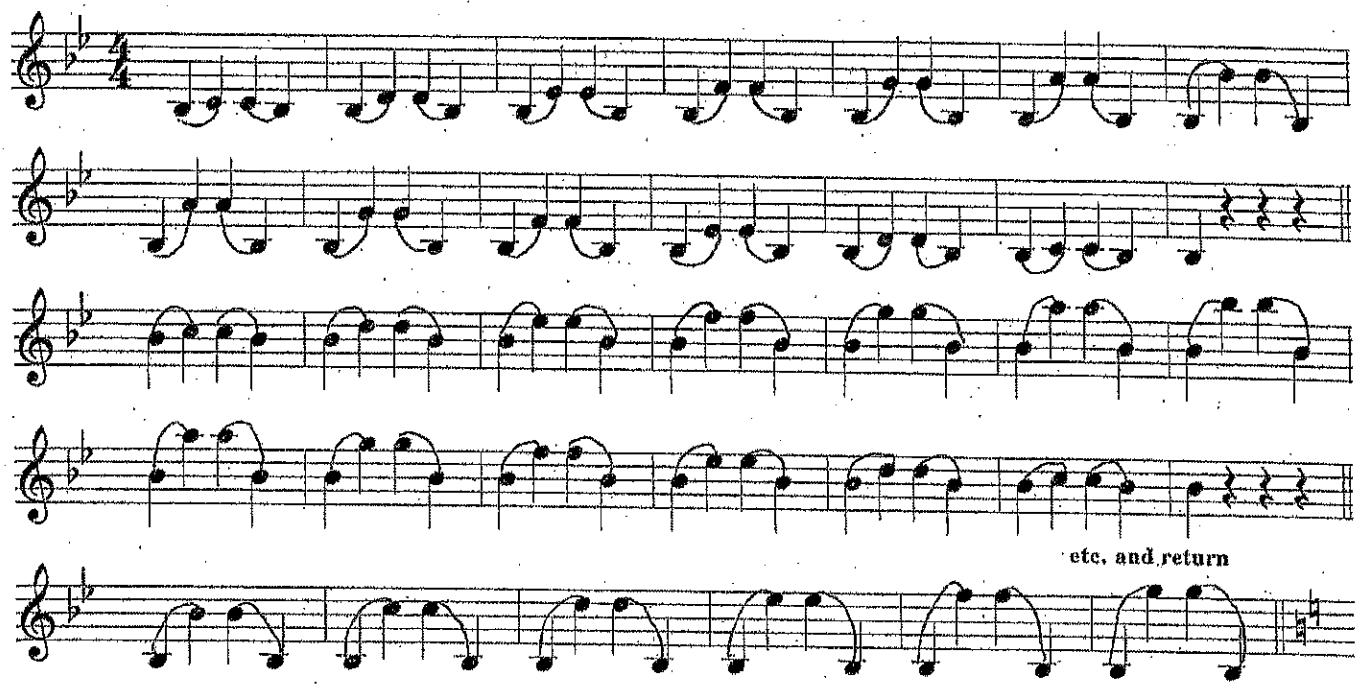
VARIATIONS





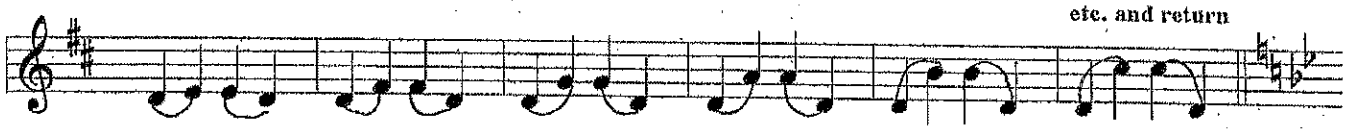
GARY KARR SHIFTING EXERCISE

Fingerings: 1-1, 1-2, 1-3, 1-4

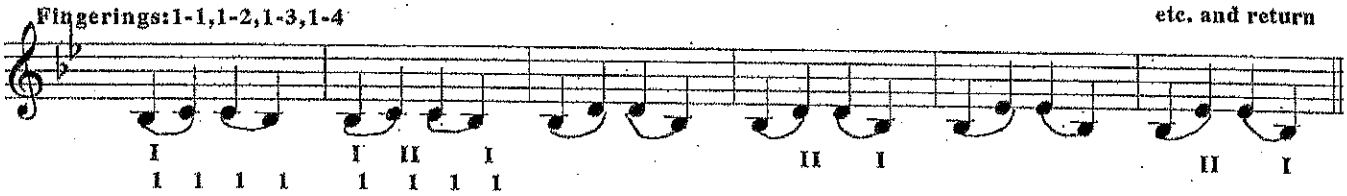


Fingerings: 2-1, 2-2, 2-3, 2-4

Fingerings: 3-1, 3-2, 3-3, 3-4



Fingerings: 1-1, 1-2, 1-3, 1-4



Repertoire List

Stewart: Pathways for Young Cellists, Schirmer*

Otis, Edith: First Study Pieces for Cello, Schirmer

Feuillard: The Young Violoncellists Method, Delrieu*

Repertoire Album: Edito Budapest

Fletcher: New Tunes for Strings,# 1&2 Boosey and Hawkes

Feuillard: The Young Violoncellist, 1A & 1B, Delrieu

Squire: Fairy Tales, Cradle Song

Webster: Scherzo

Deri: Solos for the Cello Player, Schirmer

Breval: Sonata in C major, Schott or International

Squire: Tarantella, International

Marcello: Sonatas in G & C Major, International

Squire: Dance Rustique, Schirmer

Kummer: Method, Schirmer*

Cellists Favorite Contest Album, Carl Fisher

Popper: Gavotte #2, International

Beethoven: Sonatine, Peters

Bazelaire: Suite Francaise, Schott

Vivaldi: Sonatas in A & E minor, Schirmer

Bach: Suite #1, Henle

Eccles: Sonata, International

Breval: Concerto # 2 in D, Delrieu

Sevcik: Bowing, Op 3 40 Variations, Bosworth*

Sammartini: Sonata, International

Beethoven: Handel Variations, Peters

Kabalevsky, Major and Minor Etudes, Sikorski*

Faure: Elegy, Boston Music

Popper: High School of Cello Playing, International*

Popper: Tarantella, International

Popper: Hungarian Rhapsody, International

Haydn: Divertimento, Elkan Vogel

Hindemith: Drei Leichte Stucke, Schott

Bartok: Rumanian Dances, Universal

Haydn: Concerto in C, International

Saint-Saens: Concerto, Henle

Bach: Gamba Sonatas, Peters

Bach: Suites #3, #2

Beethoven: Sonata #1 or #2 Peters

Brahms: Sonata in E minor, Wiener Urtext

Lalo: Concerto, Peters

Francouer: Sonata, Schott

Boccherini: Sonata in A, International

Locatelli: Sonata, International

Valentini: Sonata, International

Elgar: Concerto, Barenreiter

Paganini: Variations on one String. Chester Music (IMC)

Boccherini: Concerto in Bb, Breitkopf

Kabalevsky: Concerto

Piatti: Caprices, Ricordi*

Ginastera: Pampeana

Tschaikowsky: Rococo Variations,Peters

Tschaikowsky: Pezzo Capriccio

Beethoven: Sonata in A major, Henle

Schumann: Fantasy Pieces. Henle

Dvorak: Rondo, Silent Woods, Henle

Haydn: Concerto in D, Schott
Dvorak: Concerto in b minor, Breitkopf

Bach: Suites 4,5,6

Shostakovich: Sonata, DSCH

Foss: Capriccio

Prokofiev: Sonata, Sikorski

Shostakovich: Concerto, Sikorski

Schumann: Concerto, Breitkopf

*Etudes