

TECHNIQUE AND EASE IN VIOLIN PLAYING¹

For want of a nail the shoe was lost
For want of a shoe the horse was lost
For want of a horse the rider was lost
For want of a rider the battle was lost
For want of a battle the kingdom was lost

Rudyard Kipling

Many players suffer the frustration of knowing that their playing could be better, easier or more comfortable, but without knowing how to go about improving it. Some go round in circles for decades without ever finding the answers to their questions, simply trying to survive from day to day or performance to performance.

When violinists feel restricted by tension in their arms, hands and fingers, there are usually a multitude of interrelated factors responsible. Many of these factors are subtle or invisible aspects of technique which, though seemingly insignificant, each set off a chain-reaction of tension that spreads throughout the entire playing. There are likely to be many separate chain-reactions all occurring at the same time, starting from different areas and reinforcing each other in a complex network.

In most cases, each of these subtle aspects of technique that produce tension are more a matter of technique needing to be improved, rather than it being the case that the technique is good but that unfortunately there is a lot of unexplainable tension.

Violin technique is a mosaic of 'techniques'. Five different notes on a keyboard instrument may require five virtually identical methods of depressing the keys. On the violin the same five notes may require five completely different methods of producing each note: the first note may require the bow to be placed on the string silently, then to move along the string with a bow speed that changes from fast to slow and a pressure that changes from heavy to light; the second note may be played by dropping a finger on to the string without affecting the motion of the bow whatsoever; the next note may require the bow to pivot across to another string at the same time as changing direction, coupled with a movement of the left hand to another area of the fingerboard, and so on.

Whether you are an elementary or a concert violinist, playing the easiest or the most difficult piece, most of the techniques used are the same. Apart from certain virtuoso elements that do not arise in simpler playing, to an extent an 'easy' piece is one where few different techniques have to be employed at the same time or in close succession; a 'difficult' piece is one where there may be dozens of different techniques employed simultaneously or in extremely rapid sequence.

The world-famous violin teacher Dorothy DeLay once said: "Sometimes I wonder why anybody is ever interested in anything I have to say – it all seems so simple!" The sort of playing she is typically dealing with, i.e. the big concertos and technical show-pieces, is made up of the same 'basics' that elementary pieces are. A concerto may be a thousand times more difficult than an elementary piece, but the language used to describe what is happening in them is basically the same for both.

The mechanics of playing are not intangible like the musical-expressive side of playing. 'Artistry', 'musicality', 'expression', 'communication', 'talent' and suchlike are aspects of a veiled world which cannot easily be quantified and defined. But the entire physical side of playing – the concrete reality of the hands and the bow and the string and how they work – is fully describable from beginning to end, and therefore teachable or changeable.

The key that opens the door to every aspect of technique on a string instrument is in thinking in terms of proportions. 'Divine proportionality', as Leonardo di Vinci called it, is also the fundamental basis of every musical consideration, for example dynamics, intonation, tempo, and so on.

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The moment you begin to consider your playing in terms of the proportions of one movement (or aspect of playing) to another, the flood gates open and you can find that, far from not knowing how to proceed in solving problems of technique and/or tension, you have a non-stop stream of information always available and can work on yourself as potently as any teacher can work on you.

Each element or facet of playing, musical or technical, can be expressed in terms of proportions. Everything is always a question of measurement: how fast the finger drops or lifts relative to the tempo; how fast the bow moves relative to the pressure and distance from the bridge; different speeds and widths in the vibrato; different heights and lengths in the spiccato, and so on. The position of the violin, and the placement of the hands and fingers on the instrument and bow, are also questions of proportions touched upon in the following pages.

Paradigms

Practice has little to do with training muscles. The muscles are always innocent, simply carrying out instructions from the brain. Playing is literally 'all in the mind'. Suppose you sight-read through a piece, making many mistakes of intonation, sound, rhythm and so on. Then you practise it for two hours, after which you can play it fluently. What has changed? Physically you have not changed at all. It is not like building up in a gym for a month, after which the muscles you have trained are now physically different. All that has changed is that your mental picture, of what and how to play, has now taken shape. The same applies to building, shaping or redesigning technique: it is not the strength or the state of the muscle, but the thought behind the muscle, that counts.

If you want to change the way you play, you have to change the way you think about your playing. One of the chief jobs of the teacher is not only to present and implement helpful ideas, but also to weed out the unhelpful ideas that are getting in the way. The problem is that many of these may be buried so deeply that, although they continue to exert an influence, they are forever hidden and forgotten whatever the good intentions of the teacher or the student.

One of my first pupils was a boy of nine who, in three years, developed from a poor Grade 1 standard into a poor Grade 5 standard. He always had a very 'wooden' bow arm and was never able to find that sensuous quality of bowing that distinguishes a natural string player. We worked on his bowing constantly with no real improvement, except that as the years went by he was able to play harder pieces – but still with the same wooden tone and tension.

Finally a new fragment of thought came up which explained why progress had been so limited. *He had always thought that the bow moved in a straight line.* In fact there is no bow stroke on the violin that moves in a straight line: every stroke is curved, or moving in a slight arc, the bow playing (even if imperceptibly) *around* the string.

Perhaps the very first time he saw a violin being played he unconsciously registered the impression of the bow moving in a straight line as a fact. Or perhaps his first teachers, in trying to get him to draw the bow parallel with the bridge, had unwittingly communicated the idea of a straight line. Wherever it had come from, this single erroneous idea, active but hidden at the back of his mind, short-circuited his every effort to play.

If I want to demonstrate symptoms of tension and awkwardness in bowing, all I need do is try to draw the bow in a 'straight line': the symptoms appear at once with startling naturalness. With sufficient will-power and determination many players can reach quite a high standard even with such an in-built deficiency as trying to play in a straight line – but there will always be an element of strain or 'something not quite right' about their playing.

A new student coming for a lesson recently had an awkward-looking left-hand action. I made various suggestions which she was slow to pick up. She began to seem rather untalented. Then it came out that she had always thought no finger should ever touch another finger. This explained not only her original awkwardness but also her slowness at finding any new feeling: she was trying to fulfil the paradigm of fingers not touching each other while at the same time trying to fulfil my suggestions.

Tone production is an area where a change of concept can work wonders in bringing relaxation and ease into the right hand and arm. Remarkably few string players have a clear understanding of what the hair of the bow actually does to the string, and how sound is the result of certain proportions of speed of bow and pressure relative to the distance from the bridge. This is not to say that they cannot play with a beautiful tone – a good player with a natural feel for the string, playing with inspiration, does not require an intellectual understanding in order to play;

nevertheless, most players do find enormous benefits of increased control and security when they start to work on their tone in a systematic way using carefully weighed proportions of speed and pressure at different distances from the bridge.

Another important aspect is the concept of release. There must be as many releases of the muscles as there are contractions. A useful analogy is the binary code used in computers, where all information is reduced to numbers made up of ones and zeros – either ‘on’ or ‘off’. Similarly, the actions of the left hand could be expressed as a string of digits, ‘1’ representing a muscle in use (i.e. contracted) and ‘0’ representing the same muscle released.

In some passages the sequence would be ‘10101010’, i.e. every action immediately followed by a release before another action. In other passages it would be more a matter of releasing *often enough*, as in ‘10111011110’. But if the number reads ‘11111111’ for too long, tension is inevitable. Discovering where to release – or more than that, beginning to approach every action on the violin from the standpoint of constant release and ‘not-doing’ – is often a major, defining step that can quickly help a player develop greater ease.

Difference between conscious control and autonomic

The degree to which individuals are able to let go of conscious control when they are making music, to let the arms, hands and fingers function without interference, can define the level of musical and technical achievement they are able to attain. It is not possible to play a musical instrument as complex and subtle as the violin using conscious control, but our bodies are clever enough to play it themselves. The autonomic nervous system is a super-computer which responds at lightning speed to the musical images we hold in our mind, producing a quickness, smoothness and flow of muscular action that we can only parody using conscious control.

A simple experiment: most people can whistle a note and then sing exactly the same note; then the same a tone higher, and so on. To be able to shape the vocal chords or the lips to within hundredths of a millimetre is a miraculous ability that we cannot take much credit for, since we could not possibly do it ‘ourselves’ using conscious control.

The great pianist Artur Schnabel said that the player has to be one hundred per cent the ‘inner man’, and one hundred per cent the ‘outer man’, at the same time. While remaining in overall conscious control of the playing, and occasionally even making deliberate technical judgements note by note, at the same time we must simply focus on the musical drama and expression and let our bodies perform all that is necessary to produce the musical result we picture.

During any one second of playing the brain sends thousands of messages to the muscles in the fingers holding the bow (for instance). The player could only send one or two conscious messages in the same period of time. All the player can do is hold the bow in such a way that he does not in any way inhibit the tiny adjustments to the bow hand that the autonomic nervous system commands. The player must concentrate on the music, and if the technical defaults are correct the right physical responses will follow.

On the physical plane, effort rewards. If I am hammering a nail, the harder and the faster I hit it the sooner the job is done. On the mental or emotional planes, the reverse is true: effort defeats. It is the harder you do *not* try, the easier everything becomes. Listening to the TV commentary during the 1997 tennis quarterfinal at Wimbledon in which Michael Stich soundly defeated the British champion Tim Henman, the parallels between sport and violin playing were obvious. Henman had been playing very well in the matches preceding this one and his tennis was full of neat, clever or daring shots that won him point after point. In this match, he was still making those same shots but they were all played long or wide and missed repeatedly. At one point the commentator remarked: “Tim Henman is trying too hard. When you are trying as hard as he is, all the playing goes on to a conscious level, instead of remaining on a deep, instinctive level. He needs to forget himself. He should just run to the ball and hit it, and remember what it feels like to *enjoy* hitting the ball, *without caring so much about the result.*”

Mental rehearsal

Mental rehearsal means visualising exactly how you want to play the beginning, middle and end of each note and phrase, as well as the physical actions that produce them, as clearly as if you were watching an internal video. A mere ‘wish’ or optimistic attitude is not enough: the pictures need to

be in great detail and include precise physical motions, the musical drama and expression, tonal colours, general ease of playing, and so on.

What is fascinating about mental rehearsal is that in your mind's eye you see exactly the same strengths and weaknesses as exist in your actual playing. For example, if your hand habitually goes tight when you play a particular note or phrase, you will see yourself tensing when you imagine playing. This is because you are accessing directly the very same 'computer program' that 'runs' your playing. By changing the images in your mind, the next time you pick up the instrument you find your playing has changed too.

All the most successful performers in any field rehearse mentally, whether they have a name for it and do it knowingly and deliberately or not. They relish every opportunity to run their performance through the mind in a constant process of sculpting and refining the vision – on trains, in the bath, in bed, while walking down the street. This is why players nearing a performance may often seem slightly distant and distracted, and require solitude and isolation.

Why are violin or viola players so at risk of tension? Three examples:

- 1 Perhaps the first inherent problem is the way the left hand has to be placed on the neck of the violin. Only the violin and the viola require that the player rotate the left forearm clockwise (in order that the fingers can reach the strings) in such an unusual fashion. By comparison, every other orchestral instrument requires a much more natural position of the arms and hands.

The further the violin is pointed in front of the player, the greater the clockwise rotation of the forearm. If the hand is positioned correctly on the instrument, and the instrument is held at the best angle to the body, it is possible to play with great ease. Tension in the wrist and hand is likely if the violin is pointed unnecessarily far in front, and if the hand is twisted excessively clockwise.

- 2 Another inherent problem is the way the instrument is positioned between the collarbone and the chin. Trying to hold the violin by pressing down with the chin (while at the same time pushing up with the shoulder) is an all-too-easy trap to fall into. If the neck is tense or fixed in a state of imbalance, tension soon spreads to the shoulders and from there to the arms and back. Keeping the neck free is one of the central tenets of the Alexander Technique. If the neck is not free, this alone is sufficient to prevent the rest of the system from operating in a state of balance, continual release and easy movement.

- 3 The fingers must press the strings down with great subtlety and sensitivity, using the minimum finger pressure possible (just enough to stop the string enough to make a proper sound). Very often, the string does not even have to be pressed down far enough to touch the fingerboard.

Excessive finger pressure has the effect of locking the hand into a vice-like grip on the neck of the instrument. It necessitates proportionate counterpressure from the thumb, the opposing fingers and thumb working in a vicious circle towards less and less ease of movement.

There are other factors which can cause tension, many of which will be touched upon below. But taking just these three examples alone, it is easy to see how problems can arise. Picture the violinist who plays with the scroll of the violin too far in front, twisting the left forearm uncomfortably clockwise, pressing the chin into the chin rest hard enough to cause sores and abscesses on the neck and tension in the shoulders and back, pressing the fingers into the strings hard enough to cause calluses on the fingertips...and sustaining all this for many hours each day.

Principle areas of potential difficulty

The following list includes the most common technical areas where tension typically arises. Most players would recognise at least a few items on the list as applying to themselves. There are many to whom only a few items would *not* apply.

Basic posture

The violinist who has no postural deficiencies is rare. Typical areas of concern for violinists of all ages, standards and branches of the music profession are:

There must be sufficient 'grounding', the weight of the body naturally feeding down into the floor or the sitting bones. If you imagine a line drawn from armpit to armpit, many violinists play only

from above this line – rather like the asthmatic who breathes only at the very top of the lungs without being able to exhale.

The hip joint must not collapse forwards, a condition noticeable in many violinists. A sure indication is sciatic pain that the player tries to ease by bending forwards as if to touch their toes. Keeping an upright and balanced posture in the upper regions of the back, neck and head is impossible if the hip joint has fallen forwards.

The player must not ‘pull down’, bending forward in the region of the diaphragm, which causes the upper back to bend forward and the shoulders to pull in. Pulling down is caused partly by the weight of the violin (and especially the viola); by an excessive forward-and-down position of the head; by a collapsed-forward hip joint; and by a lack of natural balance throughout the skeleton.

The head must always be in a state of balance – not held in a fixed position – on top of the spine. The weight of the head alone is sufficient to counterbalance the violin, leaning on to the chin rest without downward pressure. Then it does not matter if at certain moments the violin is held more firmly by the head, so long as these moments are immediately followed by release and restoration of balance.

Angle of the violin to the player

Many players use an angle of the instrument inappropriate to the length of their arms. Long arms: the violin should be held more to the left. Short arms: the violin should be held more to the right.

This was touched upon earlier in connection with excessive clockwise forearm rotation of the left arm. In addition, long-armed players with the violin pointing too much in front of them cause themselves bowing difficulties. They are able to play almost to the furthest end of the bow using the right forearm alone, which can lead to a cramped style of bowing caused by insufficient use of the right upper arm. Awkwardness may occur in a variety of bow strokes since a majority of bowings originate in the upper arm (the main lever).

Angle of the violin to the floor

There are four problems caused by holding the scroll too low, so that the instrument slopes down towards the floor:

- 1 The left upper arm is brought in too close to the body, and in extreme cases is brought to rest against the side of the chest. The reduced mobility of the elbow has to be compensated for by twisting the left hand at the wrist, to enable the left fingers to reach the different strings.
- 2 The lower the scroll the less the right upper arm has to be used to reach the end of the bow. Long-armed players who hold the violin too low are again particularly prone to the awkwardness of bowing that comes from an underused right upper arm.
- 3 Even if the violin is held parallel with the floor the strings still slope down, away from the bridge, because the neck of the violin slopes down away from the body of the violin. If the violin itself slopes down, the downward slope of the strings is acute.

This encourages the bow to slip constantly towards the fingerboard. Because the strings at the fingerboard lack the tension that they have near the bridge, and therefore cannot take much weight from the bow without the tone cracking, the player is never able to relax the bow arm into the string, and must forever hold back whatever power or stature is demanded by the music. Apart from the problems with tone production, the lack of confidence that is inevitably part-and-parcel of a weak tone manifests itself in further right-arm tension.

- 4 A high scroll throws the weight of the violin back towards the body, which helps to maintain an upright and balanced posture. Playing with a low scroll encourages the player to ‘pull down’.

Tilt of violin

If the violin is too tilted clockwise along its axis, the top string does not give enough support to the bow, causing weak tone production. If the violin is too flat, playing on the lowest string becomes unnecessarily effortful: there is further to go for the left little finger to reach the string, and you have to raise the right, upper arm too high for comfort and easy balance.

The best tilt is one where the upper string gives sufficient support to the bow, while at the same time the right arm and little finger can easily reach the lower string. Like all defaults this can be

changed while playing, sometimes tilting the violin less when playing on the upper string, and tilting it more when playing on the lower string.

Position of chin rest on instrument

Long arms: chin rest positioned to the left of centre of the violin.

Short arms: chin rest positioned more towards, or directly at, the centre.

Long-armed players with the chin too much in the centre of the violin may once more lose some of the activity of the right upper arm. Short-armed players with the chin too far to the left of the violin may find it impossible to reach the end of the bow without strain in the bow arm.

Correct placement of chin on chin rest

The difference between the following two ways of placing the chin on the chin rest may seem so slight as to be insignificant, yet the difference in results can be enormous:

- 1 Place the violin on the shoulder without yet dropping the head on to the chin rest. 'Lengthen' your neck: feel the back of the top of your head seeming to rise. Feel your back lengthening at the same time.
- 2 Rotate your head sideways until your chin is above the chin rest.
- 3 Drop the head, without pressing, on to the chin rest.

This produces exceptional benefits of ease and freedom. The way *not* to place the chin, which can easily produce immediate and on-going tension, is as follows:

- 1 Place the violin on the shoulder.
- 2 Rotate and drop the head at the same time, moving 'diagonally' into the chin rest.

Placement of hand on the neck of the violin

Cases of players with small hands positioned too low in relation to the fingerboard are rare, but there are always frequent examples of players with large hands positioned too high. The result is a too-steep angle of the finger to the fingerboard, and an extreme loss of easy finger movement compared to the ease brought by a lower hand position.

Angle of base knuckle joints to fingerboard

If the angle of the knuckles to the fingerboard is not right, the fingers significantly lose ease of movement. The placement of the hand naturally varies according to the specific notes, but the default should set the knuckles neither too parallel to the fingerboard, nor at too much of an angle to the fingerboard (so that the base joint of the little finger is much higher than the base joint of the index finger), but at some natural point in between.

The angle is largely determined by which part of the fingertip contacts the string. The more the finger is placed on the far side of the fingertip (the side closest to the thumb), the more angled up are the knuckles; the more the finger is placed on the near side of the fingertip, the more the knuckles are parallel with the fingerboard.

A further point is that the hand must not be turned outwards too far (so that the base joint of the little finger is too far from the neck of the violin); neither must the base joint of the little finger be too close to the neck.

Wrong part of the fingertip leading to wrong angle of base joints and elbow.

Which part of the fingertip contacts the string is one of the most crucial issues because it affects several other areas directly.

If any of the fingers (except the index finger) are placed too much on the left side of the fingertip (the side nearest the thumb):

- 1 The knuckles slope up at too much of an angle to the fingerboard.
- 2 The left elbow pulls in too far to the right.
- 3 The wrist pushes out.
- 4 The fingers squeeze together or lean back on top of each other.
- 5 The muscles in the palm of the hand contract.

6 The movement of the finger from the base knuckle joint becomes tense.

Changing the part of the fingertip can be traumatic for a professional player since initially the ‘wrong’ way of doing it feels infinitely more comfortable and easy than the ‘right’ way. It is therefore often one of the most difficult areas to improve, in contrast to, say, tone production, where most players can improve their tone without having to go backwards before they can go forwards.

Concept of thumb

I have asked hundreds of violinists if they know how many joints they have in their thumb, and all but a handful have said that there are two joints, not realising that the base joint of the thumb is near the wrist.

If this is the mental picture – that the thumb begins at its middle joint – the agile, clever motions of the thumb are hindered. Trying to relax the thumb from its middle joint to its tip is impossible if the muscles in the ball of the thumb are in a state of contraction. Trying to move the thumb only from its middle joint has nothing of the ease and mobility that comes when it is moved from the base joint.

For many players, this can be another case of the cure lying in the realisation. Once they have understood that the thumb is actually the longest, not the shortest, finger on the hand and that, in effect, it has the same number of phalanges as the other fingers, a natural release is likely to develop over time. If necessary there are specific exercises designed to release the thumb; you can choreograph moments of complete thumb release into the playing; you can support the scroll of the violin against something and play without the thumb touching the neck of the violin, and so on.

Squeezing the thumb next to the first finger

Keeping an open space between the middle joint of the left thumb and the very base of the index finger is vitally important, since any squeezing immediately locks the hand. Squeezing the left thumb tightly against the first finger is an extremely widespread problem, even amongst otherwise good players who have yet to feel the accumulative effect of the on-going tension that it produces.

Basing the left hand position on the upper more than the lower finger

Most players would benefit from addressing this interesting and difficult-to-correct area.

If the balance of the left hand is primarily based on the index finger, the ring finger and little finger have to stretch up uncomfortably to their notes. If the balance of the hand is based more on the little finger, with the other fingers reaching *back* to their notes, the hand automatically widens at the base knuckle joints and the notes are much easier to reach. In addition, leaning the hand too much on the index finger causes the other fingers to be placed too much on the left side of the fingertip.

Very small hands need to be based much more on the ring and little fingers. Very large hands can be based on the index finger, but even these players benefit from practising occasionally with the balance of the hand entirely on the little finger.

The difficulty of correcting this area, particularly in a professional player who cannot easily give up work for a while, is that until the new hand position has become familiar it may simply feel terribly uncomfortable; when the player can therefore perform better with the old, ‘wrong’ hand position, they adopt the new hand position with understandable reluctance.

Moving fingers from the base joint

The main movement of the left fingers must be from the base joints, the rest of the hand remaining entirely still. Trying to move the fingers more from the middle joint, or moving the fingers partly by moving the whole hand, is a clear indication of lack of easy finger action.

The lightness and ease that comes from moving fingers entirely from the base joints is normally something that each player must first develop, and then continually revise and refine if it is not to be lost. Many professional players have never experienced the extraordinary ease that comes from moving fingers from the base joints.

Finger pressure

Throughout nearly all playing the correct amount of finger pressure is *as much as necessary (to stop the string properly) but as little as possible*. After the initial impact the finger releases the string slightly. The default should be ‘drop-release’ rather than ‘drop-press’.

Excessive finger pressure is one of the single most common, and at the same time most damaging, problem areas of technique.

- 1 It causes the thumb to counterpress and, with the neck of the violin clamped between the opposing fingers, lightness, agility and ease of movement are immediately lost.
- 2 Shifting becomes unreliable if the finger, in a continual state of pressure-related tension, is unable to release the string sufficiently while the hand moves.
- 3 Good intonation relies on a light and instantly responsive left hand. The autonomic nervous system, sending millions of commands each second to the muscles, is entirely defeated if the left hand is tight. The left hand *has* to be tight if there is too much finger pressure.
- 4 Vibrato, which relies on give in every joint of the hand, becomes stiff and clumsy if the fingers press too hard. In some players, the vibrato becomes too slow and wide, and in others becomes too fast and tight.

Compounding the problem, these insecurities and difficulties caused by excess finger pressure naturally create anxiety in the player, the first reaction to anxiety being further muscular contraction, and so on.

One of the problems many players have to address is finger pressure being influenced by bow pressure. The tendency is to press the left fingers harder into the strings because of playing more deeply into the string with the bow, leading to all the above problems associated with excessive finger pressure.

Excess finger pressure is not difficult to cure. In many cases the simple discovery of the possibility and desirability of light fingers (many players believe that they should press the strings firmly), is enough.

There are also various exercises designed to lighten the finger; you can choreograph moments of complete release into the playing, note by note and phrase by phrase until the releases become habit; you can play through phrases, passages or whole pieces with the fingers so light on the string that you cannot play with a proper sound, and then play through again with the fingers fractionally heavier, and so on.

Squeezing fingers together

Since every hand is different the amount of space between each finger varies from player to player. Some hands naturally have considerable space between each finger in most situations of playing, while other hands may find the fingers constantly touching each other. The key element is for there to be no *active sideways pressing* against another finger as part of stopping a note.

Which part of the fingertip touches the string is one of the main factors determining how much space there is between the fingers.

Height of fingers

The faster the passage the nearer the fingers must stay to the strings. Raising the fingers too high doubles or triples the energy used for the passage and can make fast playing impossible. An orchestral player with a too-high finger action, spending six hours a day playing furiously fast and difficult symphonic music, runs the risk of extreme fatigue which, all-too-often, must be ignored and the next rehearsal or programme tackled.

Vibrato mechanism

Of all the many issues concerning vibrato, the most common difficulties arise from the following:

- 1 There should be only one active direction of movement in vibrato: *forward* to the in-tune note.

Vibrato can be likened to clapping, where there is only one active movement to bring the hands together, the hands then bouncing apart again as a 'passive' movement. The hands go 'in, in, in, in' not 'in, out, in, out'. In the same way, vibrato goes forward, forward, forward, forward', not 'forward, back, forward, back'.

Trying to make an active movement forward and back requires twice as many actions and thus requires twice as much energy. It creates a vibrato that is too wide and too slow, but efforts to speed it up may end in fatigue and tension.

- 2 Finger pressure should be heavier during the forward movement, lighter during the backward movement.

During the forward movement of the vibrato, the fingertip naturally leans slightly more heavily into the string. During the passive, backward movement, the finger naturally releases the string slightly. A vibrato with equal finger pressure backwards and forwards is impossible to play fast, and is a major cause of left hand tension in general.

There are specific exercises designed to build the rhythms of the vibrato, or to release the finger on the backward vibrato movement, which can be very helpful.

Left wrist

In low positions (when the left hand is nearest the pegs) the ideal is for the left forearm and the back of the hand to be in a straight line continuing up to the middle joint of the fingers, i.e. the wrist neither collapses in nor sticks out, the hand bending neither to the left nor to the right. There are many note patterns that may require an inward or outward movement at the wrist, or even at times a sideways bend, but this does not matter so long as the wrist quickly returns to its normal position in a state of release.

It is the wrist being stuck in one position that leads to all-over muscular contraction in the hand and fingers, not individual actions from time to time. However, many players habitually bend the wrist outwards when using the little finger. Doing this actually lengthens the distance the little finger has to reach and should always be avoided in favour of *bringing the base knuckle joint of the little finger closer in to the neck of the violin*.

Left upper arm (elbow position)

The best position of the elbow is *only as far to the right as necessary (for the fingers to reach the strings), and no further*. Holding the elbow fixed in one position, especially if it is pulled excessively over to the right, is a major cause of tension. The key muscle is the xxxxxxxx, which it is essential to release constantly. Few violinists are entirely free of excess and inappropriate contraction in the xxxxxxxx muscle, and those with chronic tension in this area can find their playing seizing up entirely.

The elbow position is influenced by which part of the fingertip contacts the string. The more the finger is placed on the left side of the fingertip the more the elbow moves to the right; the more the finger is placed on the near side of the fingertip, the more the elbow moves to the left.

The elbow needs to be mobile underneath the violin, always accommodating the fingers as they play on different strings and in different areas of the fingerboard. On the E string the elbow should be positioned more to the left. On the G string the elbow should be positioned more to the right. If the elbow is fixed in a position good for playing on the G string only, the left hand may have to twist awkwardly at the wrist to enable the fingers to reach the strings when playing on the E string.

Raising the left shoulder

Except for those players with very short necks the violin alone is often not sufficient to fill the space between the collarbone and the chin. Raising the left shoulder to fill the gap, holding it in a state of ever-accumulating tension, is very common even amongst the highest standard players. A permanently raised shoulder causes left upper arm tension, as well as the tendency to counterpress with the chin.

One way to fill the space is to use a pad or ‘shoulder rest’.² Another solution is to build up the height of the chin rest. Some players do not like any sort of pad or shoulder rest, in which case the instrument must be positioned on the collarbone, not on the shoulder. Whatever the case, it is imperative that if the shoulder is ever raised, it is immediately dropped again into a state of release.

Placement of the right thumb on the bow

The right thumb is an often-neglected area, perhaps because it is out of sight most of the time.

The thumb should be placed diagonally with the left side of the thumb (as seen from the player’s point of view when the thumb is in position) touching the wood of the bow and the right side of the thumb against the shaped thumb-piece on the bow. Four thumb problems that players commonly exhibit are:

1 Incorrect placement of thumb on the bow

- (a) If the contact point of the thumb with the bow is too much on the pad of the thumb, rather than the tip, the thumb will want to be 1) straighter, and 2) less flexible at the middle joint, and 3) tight in the base joint. (The same principle applies elsewhere: if the *tip* of the little finger contacts the bow the finger is more curved; if the *pad* contacts the bow, the finger is straighter. If the tip of the left fourth finger contacts the string, the finger curves; if the pad contacts the string the finger straightens.)
- (b) If the thumb is placed not diagonally but flat on the bow (so that the left and right side of the tip of the thumb are equally placed on the stick), the entire hand pronates excessively.

2 Treating the thumb as if it had two joints only (See *Concept of thumb*, page 7.)

3 Insufficient flexibility

The thumb should bend outwards and always be flexible, so that every bow stroke produces an almost-invisible movement at the middle joint. If the thumb is rigid tension quickly spreads throughout the entire bow arm.

4 Excess counterpressure

The amount of counterpressure should always be *as much as necessary but as little as possible*.

At the heel³ the thumb supports and helps balance the bow in the hand, but even when playing loudly the thumb hardly needs to exert counterpressure. At the point the thumb must exert counterpressure, especially when playing loudly. Playing with considerable counterpressure at the point, but failing to release it during the journey back to the heel so that the hand ends up locked when playing in the lower half of the bow, is a common error.

Bow hold: first finger position in relation to the thumb

An example of a bow hold that can give rise to tension and unnecessary effort, is one where the thumb is between the index and middle fingers – the index finger positioned one side of the thumb and the middle finger the other side.

This bow hold positions the first finger too close to the thumb to be able to exert enough weight: principles of leverage dictate that *the further away from the thumb downward pressure is applied, the less pressure is needed to produce the same effect*.

A more efficient bow hold places the second finger almost opposite the thumb but positioned ever-so-slightly to the left of centre (as seen from the player’s viewpoint), with the first finger correspondingly further away from the thumb. This very slight adjustment has a remarkably big effect in giving far more tone for far less effort.

A further point is that if the bow is held with the thumb between the first and second fingers, it creates an imbalance in the positioning of the four fingers: one finger (the index) on one side of the thumb and the other three fingers on the other side. This imbalance causes instability and awkwardness: it can lead to tension as too much effort is required, and too many bow strokes (because of the bow hold) feel intrinsically difficult or unreliable.

² A device that clamps on to the back of the violin, often with adjustable height.

³ The ‘heel’ of the bow refers to the hair of the bow closest to the hand. The ‘frog’ is the part of the bow held by the hand. The ‘point’ is the end furthest from the hand.

Wrong position of the little finger on bow

The role of the little finger is to balance the weight of the bow, particularly in the lower half of the bow but also in the upper half.

At times, the tip of the little finger can sit directly on top of the bow. In general, however, the best position is on the *upper, inside edge* of the bow.⁴

If it sits on top of the bow there is often a danger of it slipping off the bow, forwards, in the direction away from the player. On the upper, inside edge there is a feeling of the little finger pushing against the solid support of the bow.

When there is a constant feeling that the little finger is going to slip off the bow the natural reaction is to stiffen the finger. This tension immediately travels up the bow arm. Therefore, just the placement of the little finger, alone, can cause awkwardness in the bow arm in general.

Tilt of bow

The tilt of the bow (i.e. whether the side of the hair, or the flat of the hair, contacts the string), is an issue that many players neglect to consider. It seems often to be placed on the bottom of the list of priorities, yet the difference between playing *fortissimo* with tilted bow hair and with flat bow hair is obvious. Using flat hair can give twice the tone for half the effort.

Forearm rotation

The vertical movement of the upper arm is the main part of the arm used to cross from one string to another, but the hand and forearm can also take part. Forearm rotation is the same movement as turning a door handle, and is generally used with a small amount of hand movement.

Forearm rotation is another area frequently neglected. It is the first place to check when a bow arm seems to be clumsy and working too hard. This is particularly so when crossing from one string to another, but in a fluent bow arm there is an almost-invisible degree of forearm rotation even when simply bowing up and down on one string.

Lack of forearm rotation also manifests itself in a tendency to raise the right shoulder. A high percentage of players, including professionals, use an inhibited range of forearm rotation or, in some cases, no forearm rotation at all, with a high price to pay in extra effort and loss of finesse.

Localise all actions

'Localising' actions means doing only the minimum that is required to perform the left or right hand action, and nothing else. The action takes place in one locality, without all sorts of unnecessary simultaneous actions happening elsewhere.

For example playing the fingering 1 – 2 – 1, the second (middle) finger lowers on to the string, slowly or quickly depending on the character of the passage, moving from the base knuckle joint. It then lifts off the string again, moving from the base knuckle joint, the shape of the finger being much the same before, during, and after playing the note. Nothing else should happen while the second-finger actions take place. For example:

- The index (first) finger should stay down on the string without lifting off.
- Both fingers should remain relaxed, particularly at the base knuckle joints.
- They should not squeeze together sideways.
- The first finger should not press harder into the string.
- The thumb should remain relaxed, not pressing harder against the neck.
- The wrist should move neither in nor out.
- The upper arm should move neither to the left nor to the right.
- The head and shoulders should not clamp the violin tighter.
- The left hand should not move the scroll of the violin.

⁴ Some bow sticks are round, some are octagonal, but at the part of the bow that is held by the hand every bow is octagonal.

- Nothing should alter in the bow arm (unless a change of tone is wanted, in which case the actions needed for that change of tone must also be 'local' and specific to the result required).
- The face, tongue and throat should remain relaxed, completely unaffected by the second-finger action.
- The muscles in the back or front of the body should not contract, causing the spine to bend forwards or backwards, or to the left or the right.
- The legs should remain unaffected, and so on.

When all actions are performed in this way, the greatest economy of movement and energy comes into the playing, leading to ease and relaxation. The ideal is always: maximum result, minimum effort, effortless power not powerless effort.

Of course, eliminating unnecessary movement does not mean standing or sitting stiffly, blocking the sympathetic movements that happen naturally throughout all playing. The bow arm in particular sends a flow of movement down the back and legs and into the feet that is an essential element of playing.

Building all of these non-actions into the playing is as much a question of saying 'No' to all the extra actions that should not be present, as much as it is a question of saying 'Yes' to the few specific actions that are truly required.

The player must choreograph each 'Yes' and 'No' into the playing, to create a string of streamlined, focussed, incisive technical actions that require the least effort and have the fewest unwanted ramifications elsewhere in the physical system.

To practise, the player should work at a slow tempo – or even deal with a passage note by note – all the time acutely aware of the physical movements involved and stopping any movement that is not directly related to whatever note is being played.

The problem is that the player cannot proceed unless he or she knows what to look out for, and knows which are the true flowers and which are the weeds. To know that every aspect of technique can be understood in terms of proportions is not helpful unless you also know all the different elements that need to be proportionate to each other in the first place. The perfect analogy is of a cook who of course appreciates the necessity for the right proportions, but does not have the complete recipe.

Therefore, one of the starting points for improvement is the rigorous study of technique in minutiae. In almost every example of a player suffering from debilitating tension there are simple technical/physical causes that can quickly be rectified. It really is never too late, and players of any age and stage can continue to polish and refine their overall technique and move ever closer to truly effortless playing.