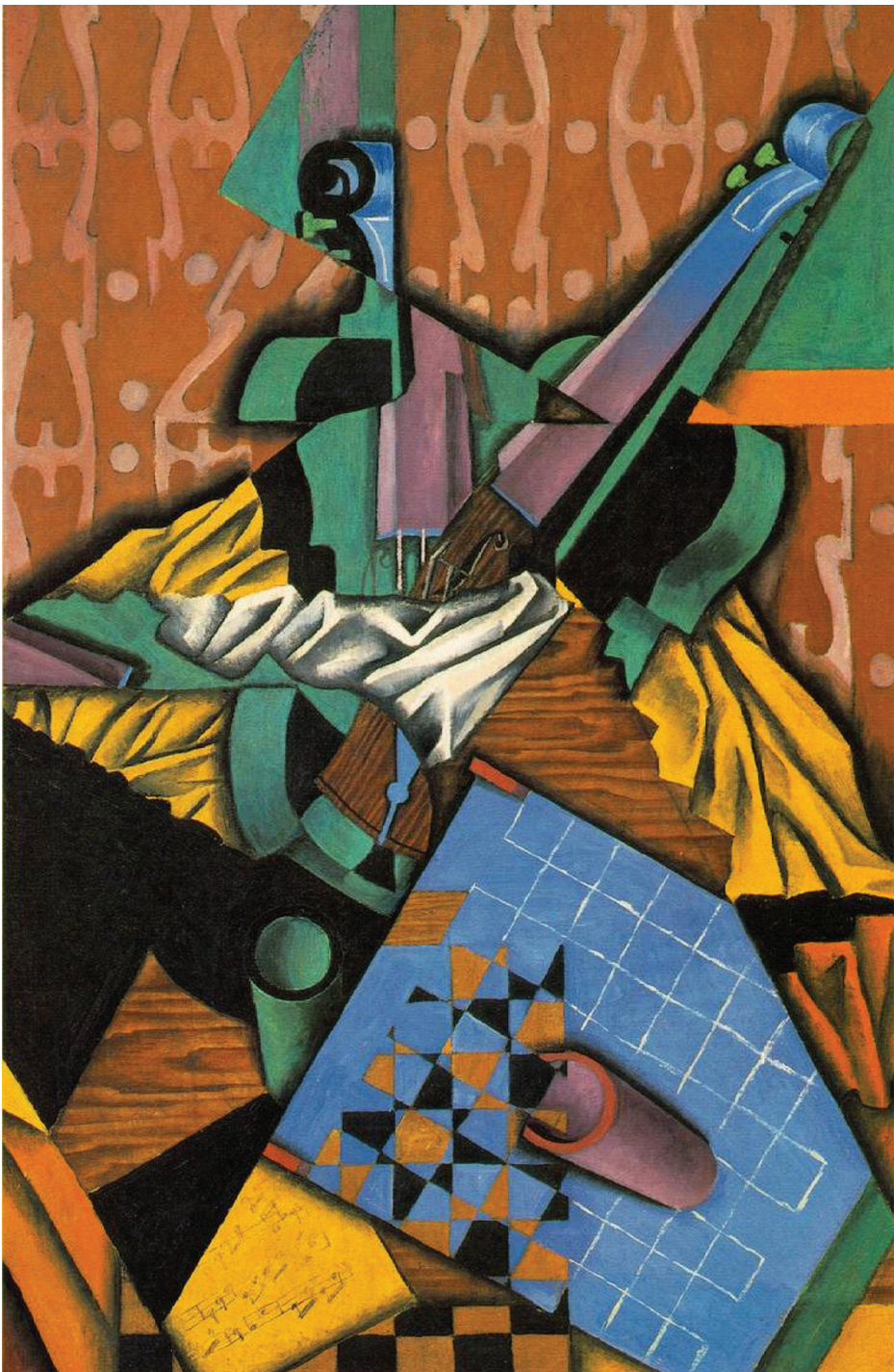


# The Violin Lesson

by Simon Fischer



A manual for  
teaching and  
self-teaching  
the violin



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# Introduction

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The idea for *The Violin Lesson* came one Christmas after going to a concert performance of Puccini's *Madame Butterfly* in London. I was sitting quite near to the front and could not help noticing a violinist in the orchestra who was directly in my line of vision, a woman in her early twenties. At first, I thought she was a former student of mine. I later found out that the two women are often mistaken for each other in the London orchestral scene.

I could see in detail how she was playing. The way she was holding the violin, and using the bow, was clearly making things more difficult for her than necessary. I thought of how easy it would be to help her, perhaps because I had seen her 'twin' become a much better player by making the same changes that this woman could make.

It seemed sad that all she needed was one or two lessons in which to learn some simple things that she had missed so far – not the whole story of violin playing, from beginning to end, but a few important points and basic principles that would help her greatly.

It would take only a couple of minutes to explain how everything was a question of getting the right proportions (*The magic word*, page 96), and that she should hold the violin a little more in front of her because of her short arms; or how, if she kept her left fingers closer to the strings her finger action would be easier.

Her bow was constantly too near the fingerboard. I thought of how quickly she could improve her sound and feel for the instrument if she practised the *Five essential tone-production exercises* (page 11). They take only seconds to demonstrate, almost anybody can do them at once whatever their standard, and the improvement in tone is always immediate.

Yet I had no way of helping her; and solving her problems would not help the many other violinists around the world who were in exactly the same position as her – one or two really quite simple steps away from a very different experience of playing the violin.

The answer seemed clear: if she needed to know only a few basic things, and if just a few lessons would be enough, it should be possible to jot the basic ideas down on only a few sheets of paper. Then she would be able to go away and sort it all out for herself in her own time.

The subjects in the first few chapters of the book immediately fell into a logical order. However, what if the same player returned for another series of lessons? What would the typical subjects be then? What if they came for a whole course of 12 lessons?

The division of *The Violin Lesson* into 12 is naturally only a starting-point. Working with an advanced student, and in a session that lasts a couple of hours, it is possible to cover much of the material of each 'lesson' in a single session. Working with less advanced students, a single point from one of the lessons, or from the *Background essentials*, may be all that is covered in one actual violin lesson.

## The science of violin playing

To develop technique on the violin you have to learn the Science of Violin Playing. But this must not be confused with studying 'real' sciences like physics, chemistry, biology, DNA and so on. Any field like these is obviously a lifetime's work, and however much you know is only ever a tiny speck compared to the amount you do not know – even if you study all day, every day, for 50 years. In comparison, the entire science of violin playing *is* only the size of a tiny speck.

You cannot study for the rest of your life how to draw a straight bow; or study how to raise and drop the fingers, how to shift, vibrate and so on. There simply isn't that much to learn. You can study *music* for the rest of your life – and after fifty years, the amount you know about music will be only a tiny speck compared to what you do not know – but that is a different matter.

On a practical, physical level of violin technique, there is not so much to know about. There are all the things you have got to learn *to* do; and all the things to learn *not* to do. Yet all this amounts to only a few principles about how to hold the instrument and bow, how to use each hand in all the various ways, and so on. The list of ‘things you need to know and do’ is not endless, and is not even very long.

*The Violin Lesson* covers the main areas where you can easily and noticeably make a difference. While not every subject is for everyone, *The Violin Lesson* has something in it for every level and type of player – elementary or advanced, amateur or professional, teacher or student.

## Can you improve your playing by reading a book?

No book can replace a teacher or the living, practical experience of playing or listening to music. But gaining information from a book, or gaining that information through having somebody listen to you play and then saying those same things to you, can often be the same thing in the end.

If you want to change the way you play the violin, you have to change the way you *think* about playing the violin. You can do that by practising or by going to a concert, and by many other means; but reading about, say, tone production, can so change your picture of bowing the string that your whole approach changes immediately and dramatically – even before you have actually put the bow on the string and started to try things out.

**Q But the points in a book can only be general ones. In a lesson the teacher deals with your specific, individual needs.**

Everyone has their own unique set of physical, technical and musical characteristics, their own particular gifts, problems, strengths and weaknesses; yet the same technical and musical points tend to appear again and again, and in the same way, in most players.

- Typical technical points in the left arm include freeing the thumb; moving the fingers freely from the base joints, without partly moving them from the hand or forearm; widening the hand at the base joints, rather than contracting; fingers remaining light without over-pressing; co-ordination, and the fundamentals of vibrato, intonation, shifting and so on.
- Typical technical points in the right arm include the basics of how to make a pure and expressive tone; fundamentals of the bow hold; the mechanics of drawing a straight bow; how to improve key strokes like *spiccato* or *martelé*, and so on.

There are actually quite a limited number of technical problems that you can have, and they tend to crop up in the same ways all the time. So the topics and issues that are explored in *The Violin Lesson* may easily be exactly those that you need to explore yourself.

Suppose your left hand does not feel comfortable. You do not necessarily need someone to look at what you, specifically, are doing, and make suggestions that are tailored only to you. The same principles are going to apply to you as to anyone else.

Building a good left hand position, or strengthening intonation, or developing tone or vibrato, or gaining confidence in shifting, is almost entirely the same process whoever you are, and whatever your age or standard.

## I’m too old – you can’t improve at my age

It used to be said that unless you had fully developed your violin technique by the time you were twenty or so, it would be too late. After that, the entire process of learning becomes slow and difficult, it was thought, and you stand little chance of making further progress.

Johann Quantz expressed this in 1752:

<sup>1</sup> Johann Joachim Quantz:  
*Essay of a Method for  
Playing the Transverse  
Flute* (Berlin 1752; trans.  
Edward R. Reilly, London,  
1966), 24.

He who wishes to distinguish himself in music must not begin the study of it too late. If he sets about it at an age when his energies are no longer vigorous, or when his throat or fingers are no longer flexible, and thus cannot acquire sufficient facility to perform...the passage-work roundly and distinctly, he will not go very far.<sup>1</sup>

The truth is that you can improve your playing at any age. ‘Improving’ means changing the way you play. Everything in violin technique can be described, and the language used to describe it is all about proportions: how much of this, in proportion to how much of that.<sup>2</sup>

<sup>2</sup> See *The magic word*,  
page 96

To change the way you play, first you must know what all the different things are that can be measured in proportion to one another. (It is no use knowing only that the recipe for a cake is made up of certain proportions. You need to know what the ingredients are in the first place.)

Then, making every change by altering the proportions of one thing to another, you can build changes into your playing at any age whatsoever.

### **Q What are some examples of changing certain actions, to improve your playing, that you could do if you were, say, fifty?**

To change from banging fingers down onto the string and then pressing the string hard into the fingerboard, and instead to place the fingers gently and to feel the springiness of the string, is something you can introduce into your playing at any age and immediately notice the difference.

- At any age and stage, you can change from playing everything with the bow too near to the fingerboard, to playing a little nearer to the bridge where the string has greater tension
- Or find a new feeling of release and lightness in the left hand by stopping squeezing the neck hard between the fingers and thumb
- Or start to encourage a feeling of forward–forward–forward–forward in the vibrato movement instead of forward–back–forward–back
- Or refine your intonation by tuning all your Gs, Ds, As and Es to the open strings, and by measuring all the sharps from the natural above, and the flats from the natural below
- Or stop extra, unnecessary physical motions that get in the way of everything else; and so on.

All of these changes are perfectly easy to make, and anyone can make them. There is no special aptitude or talent required to feel such things as the difference between the give of the bow at the heel and at the point; or to feel how you can *balance* the bow in your hand (when appropriate) rather than *hold* it; or to experiment with a new arrangement of the fingers on the bow; or to do anything else.

You simply need to know exactly what you are doing; what to do and what *not* to do; make simple changes; and then continue in the new way until the changes become new habits and ‘stick’ without your having to think about them. In just a few lessons or a few days, an adult violinist – amateur, student or professional – can change their playing as much as an unfocused child may do in months or years.

### **Q But don’t children learn much faster than adults?**

Obviously, young children can learn a foreign language without even noticing; their muscles are marvellously soft and responsive; every stage of their learning traces a brand-new path, without conflicts or confusions with previous paths; learning takes place on the deepest level of the psyche, rather than having first to be processed by the intellect.

It is common for a 10-year-old to be able to master difficult virtuosic pieces after playing for five years or less, but not so common for an adult who has taken up the violin at a late age.

Yet in a lot of ways, as an adult, you can learn and improve your playing just as quickly as a child, and in many cases much faster. You are able to measure, which is a skill young children develop only gradually. You have the benefit of the general life experience that the child has not had, so you can make connections that they cannot make; and you have the powers of reason, self-motivation and will.

You can be clear about where you are now, clear about where you want to be in the future, and take steps to move from here to there.

### **Not just trying harder**

Simply trying harder often makes things worse. Everything is a matter of cause and effect, which means that for every specific action there is a specific reaction. If you carry on performing the same actions, you can expect to keep getting the same reactions or results.

In other words, if you carry on doing what you are already doing, you just get more of what you are already getting. Then, if you try harder, you just get even more of what you are already getting. Instead, the answer is always to *change* something. The slightest change in what you are doing, or how you are doing it, will always bring about a completely new result.<sup>1</sup>

<sup>1</sup> Albert Einstein said: “The definition of insanity is to do the same thing in the same way, over and over again, and expect a different result.”

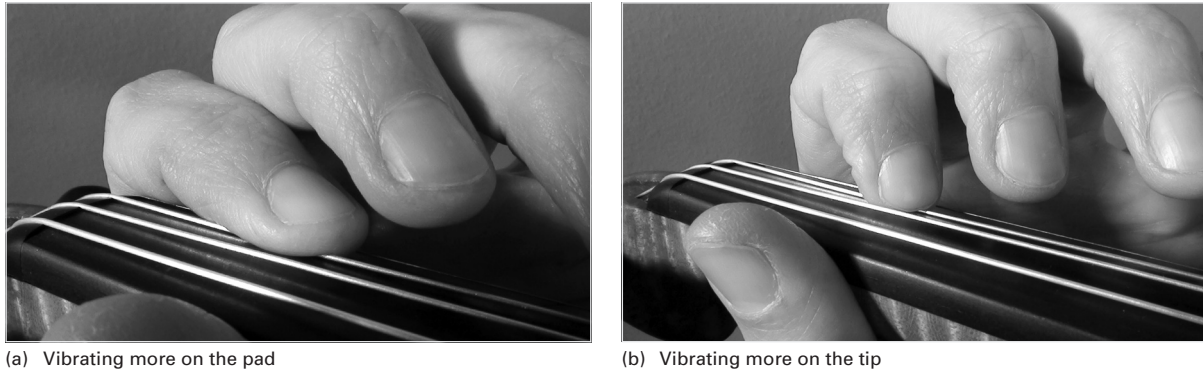
A useful catch-phrase commonly used in everything from sport to business: “Do not work harder, work smarter!”

See also  
*The importance of making mistakes, page 333*

<sup>1</sup> See *Which part of the fingertip?*, page 253

For example, the tiniest change in the exact area of the fingertip that contacts the string, changes the character of the vibrato. Instead of continuing to put the finger down on the string on the same part of the fingertip each time, and trying harder to make different colours, all you have to do is put the finger down a little flatter (Fig. 1a), or a little more upright (Fig. 1b).<sup>1</sup>

**Fig. 1**



### **Advancing without improving**

The danger to avoid is that you play more and more difficult pieces, but the way you play them, or the way you approach the instrument, remains the same.

The path many students follow is like this: at age 11 they are playing elementary or intermediate-level repertoire without good listening, not quite in tune, their fingers moving out to the left instead of hovering above the strings, the bow always too near the fingerboard without producing sonority, and so on.

Over the years they learn pieces of ever-increasing difficulty until they reach age 18 and are now playing advanced repertoire – but still without good listening, not quite in tune, fingers not above the strings, the bow too far from the bridge, and so on. They are playing more advanced pieces but they have not improved.

## **Finding the single most important next step to take**

### **The three-stage process**

- If you are practising, how can you be certain of making the fastest possible progress?
- If you are teaching, how can you be certain of your students making the fastest possible progress?

When someone stands in front of you and plays the violin, a huge amount of information floods towards you: aural, visual, physical, musical, technical, emotional, intellectual, and so on. It is similar when you are practising: there is a lot going on and you are right in the middle of it all.

There is always one question to ask: what is the single most important next step for your student, or yourself, to take? Then, what is the second most important, and so on.

Whether you are teaching or practising, there is a simple three-stage process to follow:

- 1 The first thing is to notice everything. You have to hear, see, and sense everything that is happening in the playing – every detail of technique, expression, posture and so on – without missing a thing.
- 2 Then, from the mass of information received, you have to make a list of each musical, technical or other point that could be improved or helped in some way.
- 3 Then you have to sort that list into the right order of importance. Of all the things that could be improved or helped in some way, what is the most important thing to improve right now? What is the second most important thing to improve right now?

The fastest progress comes when you isolate and improve the most important point, and perhaps also the second and third most important points. Then, once progress has been made in those areas, they fall away and others take their place at the top of the list.

The challenge is to get the list into the right order. If you work hard on what should be steps 8, 9 and 10 because you think they are 1 or 2 or 3, progress may be slower than it could be.

The list may never be absolutely complete; and there is often more than one best possible order, and more than one best way to work. However, the more complete the list, and the better the judgement in deciding what is more important and what is less important, the faster the progress.

# The tone production lesson

# lesson 1

Working on tone production is often a good first step with new students, if they are able to draw the bow sufficiently parallel to the bridge:

- When you play tone exercises, even if they are only long, sustained bows on one note, you have to play that note with feeling and musical imagination for it to be technically successful. This establishes, from the start, the vital principle that when you work on technique you nearly always have to do it *musically* and with inspiration, rather than only with detached mental control.
- Tone exercises have an immediate effect, so working on tone is an encouraging and exciting way to start a new course of study.
- As students focus on the different qualities and components of the sound, their listening is immediately alerted and sharpened. Then, because they are listening better, every aspect of playing naturally improves quickly at the same time.
- Starting with tone follows the principle of always beginning with the result you want, and working your way back from there, rather than 'starting from nowhere'. Always go straight for the tone and the expression, and then find how to do it, rather than the other way round.
- Tone-production exercises are a direct way for the teacher to begin to understand exactly what the pupil is doing with the bow, bow arm, right hand and fingers, and the pupil's entire musical and technical approach to making the instrument sing.

## Knowing the instrument

### Five soundpoints

The first step is to subdivide the area between the bridge and the fingerboard into 5 'tracks' or 'soundpoints' (Fig. 3). You can then also think of soundpoints  $1\frac{1}{2}$ ,  $2\frac{1}{2}$ ,  $3\frac{1}{2}$ ,  $4\frac{1}{2}$ ,  $5\frac{1}{2}$ .

The moment you give a name or label to each distance from the bridge you can plan your use of the bow, and explore each soundpoint's ideal balances of bow speed and bow pressure, in an entirely more practical and organised way. Then everything in your use of the bow improves.

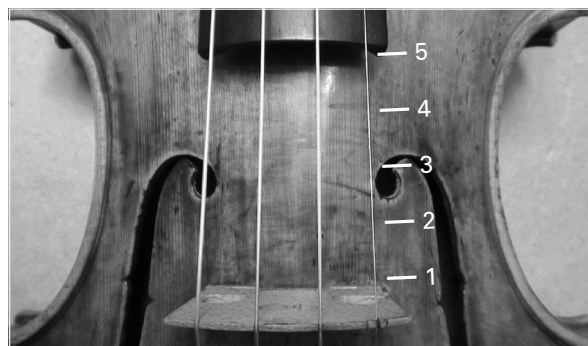


Fig. 3

Divide the playing area into 5 'soundpoints'

### Understanding what the bow does to the string

Everything in violin playing, as in the rest of Nature, is a simple matter of cause and effect. Every specific cause leads to a specific effect. If you repeat the same cause you get the same effect.

Everything the bow does to the string is a cause, and every sound that comes out of the violin is an effect. And, like the familiar saying 'the customer is always right', the violin is always right: each sound is a perfect representation of what the bow did to the string.

What exactly does the hair of the bow do to the string? This is one of the first questions to ask at the beginning of any first session of working on tone. Most string players, even beginners, will immediately reply that the hair of the bow makes the string 'vibrate'.

The next question is: what does 'make the string vibrate' mean, and how does the bow do it? Not so many will be able to answer this, even advanced players. Often, a new understanding of what is happening underneath the bow-hair completely changes their use of the bow, and does so instantly.

**An instrument of friction**

Imagine watching the bow moving along the string in ultra-slow-motion, and magnified through such a strong lens that the string and the hairs of the bow are huge. You can see clearly how the friction of the bow causes the string to swing from side to side.<sup>1</sup>

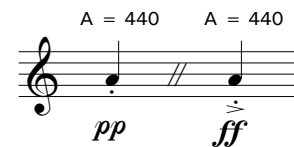
<sup>1</sup> If things had turned out differently, we might today speak of the four sections of the orchestra as the percussion, the wind, the brass, and the frictions.

On the down bow the hair catches the string and pulls it sideways to the right. As it does so the tension of the string increases. This sideways bending of the string can only continue for so long, before the tension is so great that the string springs back in the opposite direction, to the left. It is then caught again by the hair and pulled to the right again, and the next cycle begins.

The reverse happens on the up bow. The bow-hair pushes the string to the left. Therefore the string moves sideways, backwards and forwards. This sideways movement is called the amplitude.

It looks like a blur around the string and is widest at the middle point between the bridge and the nut (or the bridge and the finger). The wider the amplitude, the more carrying the tone.

The pitch of the note remains the same, however, whatever the amplitude. The note A vibrates (i.e. the string swings from side to side) 440 times each second whether it is played *pp* or *ff*, but the distance the string swings from side to side is narrower in the *pp* and wider in the *ff*:



The violin, working by friction, is a sustaining instrument. The piano, basically a percussion instrument, is an instrument of *diminuendo*: after the hammer has hit the string, all that can happen is that the vibrations of the string diminish.

Fig. 4



(a) Watching the action of the bow-hair on the string

(b) The string vibrates beyond the bow hair

**Looking at the hair-string contact from 'underneath'**

What would the hair's action on the string look like if you could see it from underneath the string? A simple way to find out is to place the instrument on a flat surface, insert the bow *under* the strings, and bow upside-down on the G or E string (Fig. 4a).

See how the string swings widely from side to side at the precise contact-point of the hair with the string.

Notice how the string vibrates between the bridge at one end, and the finger or nut at the other. It is not that the string vibrates from the contact-point of the bow with the string, but vibrates *beyond* the contact-point on the bridge side (Fig. 4b).

Find how to make the friction of the bow cause the widest possible amplitude.

**Getting more for less: speed not pressure**

If it is too much, the downward pressure of the bow into the string prevents the string from swinging freely from side to side. Then, although you are pressing hard and it feels as though you should therefore be getting a lot of volume, in fact you get more sound if you release the pressure slightly.<sup>2</sup>

<sup>2</sup> The beauty of the sound depends upon a regular pressure and movement of the bow. If a really artistic tone is to be produced, it never will be the result of pressing alone, but rather of pulling. All violinists who produce sound more by pressing than by pulling will get an unpleasant rough tone, but never reach truly beautiful and sympathetic strains. E. Kross, H. Leonard: *La Gymnastische Übungen auf der Violine* (Mainz, 1911), 3.

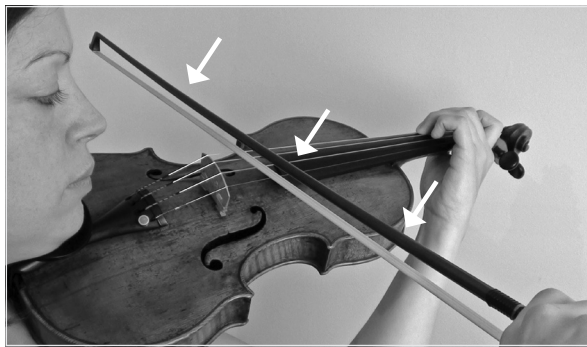
**Experiment**

- 1 Play a note in 1st position on the D string. Use quite fast bows, playing midway between the bridge and the fingerboard. See how widely you can make the string vibrate. Watch the string midway between the first finger and the bridge.
- 2 Now slow the bow a little, and slightly over-press. Notice how the width of the string-vibration becomes narrower as the bow pressure constricts the string. Notice how the tone, which is now slightly squashed and less pure, is actually smaller than it was before.

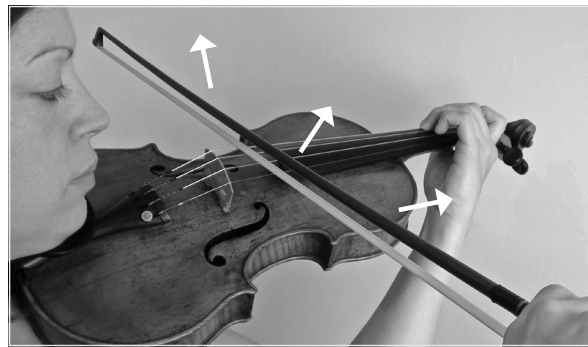


- 3 Move the bow a little more quickly and lightly again. Notice how the width of the string vibration increases, as the string is now free again to move lightly and quickly from side to side. Notice how the tone is now purer and sweeter, and seems to travel much further.

When you press too hard it is as though you are trying to drive the sound down in the direction of your feet (Fig. 5a). When instead you lighten the bow, and use speed to create the sound, you *draw* the tone out of the string (Fig. 5b).



(a) Pressing chokes the string



(b) Lift the sound out of the string, however heavy the downward weight

Fig. 5

### Q Doesn't that mean that you end up playing everything too lightly and sweetly?

You often have to sink the bow into the string as heavily as you can.<sup>1</sup> 'Speed not pressure' simply means that even when the bow is near the bridge, and slow and deep in the string, you still draw out the tone and expression with horizontal movement of bow, rather than pressing it out with downward pressure.

In playing *spiccato* there is a feeling of an upward movement to make each stroke, not a downward one into the string.<sup>2</sup> There is the same feeling of 'up' rather than 'down' when playing sustained strokes.

#### 'Pressure' or 'weight'?

Many players and teachers avoid using the word 'pressure' through fear that it may lead to pressing the bow and squashing the sound, and use the word 'weight' instead, to encourage a feeling of 'sinking the weight of the bow into the string'.

Another view is that 'pressure' indicates focus on one point, and 'weight' expresses more of a spread-out, unfocused feeling of general heaviness. Sometimes one term is appropriate, sometimes either.

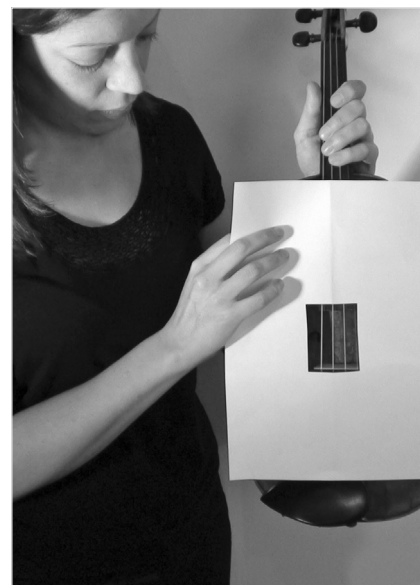
If the fingers on the bow are well distributed;<sup>3</sup> if you are sensitive to the balances of speed, pressure and soundpoint; if you let the bow lead the hand;<sup>4</sup> if you have a clear concept of the freely vibrating string, and of the purity and beauty of tone that you require – and then if you listen – there is little chance of playing with a pressed tone whatever words you use.

#### Visual image

What is the hair of the bow doing to the string? This is the central question to consider during every moment of playing. What is happening there, at the contact-point between hair and string? How are they reacting to each other? What does the friction feel like? What does the give of the string under the bow-hair feel like?

To create an easily-remembered visual image for a young pupil, take a large sheet of paper and fold it in half lengthwise. Tear off a rectangle the size of the playing area.

Place the sheet of paper on top of the violin (Fig. 6). (Obviously the student cannot play at the same time; the point is simply to see it.) Encourage the student to forget everything except this area, to focus on nothing else, to put all of their energy and effort into directing and controlling what is happening *there*.



Focus on this area

Fig. 6

<sup>1</sup> The great French cellist Pierre Fournier used to say that sometimes, when you are playing deeply into the string, you can have a feeling of moving the bow 'through thick mud'. While cello strings are much thicker than violin strings, violinists can still look for a similar feeling, especially on the G string.

<sup>2</sup> See *Up not down: playing spiccato like a pianist*, page 283

<sup>3</sup> See *Experiment in leverage*, page 40

<sup>4</sup> See *Feeling the momentum of the bow*, page 14

### Image of the cat

When you stroke a cat, it often arches its back up against your hand so that while you push one way, the cat pushes the other. Unless it does not wish to be stroked, the cat is not passive but takes part actively.

In the same way, do not let the violin or string sit passively and inactively while the bow plays on it. Play with an 'ardent violin' which rises up to meet the contact of the bow. The amount is so slight that it is imperceptible. If you can see it, it is probably too much; but the difference in the sound and the feel of the bow, between an 'active' and a 'passive' violin, is striking.

### Understanding resonance

The body of the violin is a 'resonating box'. If it were made of solid wood rather than being hollow, the sound of the bowed string would be small and thin. The bridge transmits the vibrations down into the resonating box where they are amplified.

- Using your knuckles, gently tap the body of the violin. Listen to the sound of each tap resonating through the instrument.
- Using your fingernail, scratch the top of the bridge between the strings very, very lightly. The sound is amplified greatly by the violin. Make the same scratching movement on a solid tabletop, or the wall, and notice the difference.
- Place the palm of your left hand flat against the underside of the violin and feel the vibrations of the back plate as you bow the open strings.
- Then bow a few notes on each string, listening to the amplification and resonance of the violin.

### Listening to the background resonance

Play a short note and listen to the ring that continues on after the end of the bow stroke. The question is, what happens to that ring during a longer note. In other words, what happens to the ring if the sound that produced it continues at the same time?

If you listen carefully you can hear two distinct sounds: the sound of the principal note, and at the same time a continuous background ring which is like a distinct note ringing on its own. You have to listen *behind* the sound.

The moment you start to focus on the background ring as well as the 'principal sound', an entirely new quality comes into the playing.

In the following exercise focus on the sound and duration of the background resonance. Afterwards, listen for that resonance as a fundamental part of any note.

- First listen to a stopped G, D, A or E, since these ring more easily than a sharp or flat:

The image contains two musical staves. The first staff shows a sequence of notes with various bowing techniques. Annotations include: 'Very short bow stroke' pointing to a short note, 'Listen to the ring' with a bracket over a note, 'Listen to the ring during the note' pointing to a note, 'Ringing during the note' pointing to a note, 'Ringing during the bow change' pointing to a note, and 'Listen to the ring during the note and during the bow changes' pointing to a note. The second staff shows 'martelé' and 'spiccato' strokes. Annotations include: 'Listen to the ring during the string crossing' pointing to a note, 'Listen between accented strokes' pointing to notes, and 'Listen between lifted strokes' pointing to notes.

- To produce even more ring, or when teaching young children, play the exercise on the open strings.

# Background essentials 1

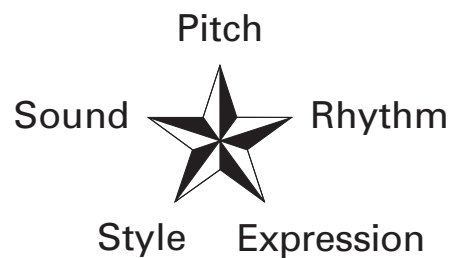
# lesson 4

## Pitch–sound–rhythm–ease

What is the ideal performance? I used to think that it consisted of five headings: pitch, sound, rhythm, style and expression.

I reasoned that if every note was in tune and had the desired sound, and was musically in time, and if the style suited the period or the composer, and if it were played with feeling, then it would be ‘perfect’.

Later it became clear that those five headings should have been only three – pitch, sound and rhythm – and that after them comes a fourth heading of how you play physically and mechanically.



### Finding the music: pitch, sound, rhythm

The three main aspects of playing music are pitch, sound and rhythm:

- To play anything, the first question is what note you want to play; the next question is what sound you want that note to have; the last question is when do you want that note to sound.
- In other words, every note must be in tune; played with the desired sound quality for the note, phrase or passage, and free of scratch or other distortion; and sounded at the right moment rhythmically.

Many instruments work along the same lines. Playing a xylophone, the first question (pitch) is to decide which steel bar to strike with the mallet. The next question (sound) is how hard does the mallet hit it, and partly the angle of the impact. The final question (rhythm) is when does the mallet hit it.

The breath is part of all three factors of pitch, sound and rhythm in playing a wind or brass instrument.

First, to make the pitch you create the right length of pipe or tube with your fingers or hands, and/or regulate the pressure of the breath or the shape of the embouchure. (For a string player, this would be like making the pitch partly with the left finger, partly with bow pressure.)

You create the tone partly by the force of the breath and sometimes (e.g. playing an instrument like the flute) partly by the angle of the breath across the mouthpiece; finally there is the question of when you blow, or when you change the length of pipe by stopping or unstopping a hole, and so on.

### Why is a harp the shape it is?

A good question to ask children is why is a harp the shape it is? Or a grand piano, or organ pipes?

On fixed-pitch instruments such as these, all the notes you might need are ready for you before you begin to play. Each string on the harp or piano is already the right length and tension; each pipe on the organ has already been cut to the right length and shape; each block on the glockenspiel is ready to be hit; but on string instruments you have to create the different string lengths as you play.

So to play any note on the violin the first thing is to decide on the exact string length; next you have to bow the string in order to hear it; the final question is when to bow it.

### Pitch–sound–rhythm IS the style and the expression

Style or expression, and the exact pitch–sound–rhythm, are the same thing. You cannot separate one from the other. After ‘pre-hearing’ the sound and the expression in your musical imagination, the precise pitch, sound and rhythm *creates* the expression, style or character. Playing musically, or in the right style for the composer, is not a matter of ‘putting feeling into it’ after ‘learning the notes’.

- Intonation and expression are inseparable. Expressive intonation, in contrast to neutral ‘piano’ (tempered) intonation, is as much a part of expression as volume or attack. To change the expression you change the tuning, which means you play flatter flats or sharper sharps to get a particular expressive colour into a note (e.g. B $\flat$ , second note of the Bruch G minor Concerto).
- Sound and expression are inseparable. If the sound is dull, or without the right character or expression, and then you add expression, in doing so you must you change the sound.

In the same way vibrato is expression. If you change the character or expression of the vibrato, you change the width and speed, or the area of the pad or tip that is contacting the string; and if you change those things, you change the expression.

- Rhythm and expression are inseparable. For a particular effect you might play more (or less) metronomically in time, or make a dotted rhythm ever-so-slightly more dotted, or sustain a held note right to the very end rather than ever-so-slightly shorter, and so on. In changing the rhythm you change the expression.
- Style is also not a separate issue. The only way to create style, or to change it, is through changing the exact intonation, sound (type of stroke and vibrato), and rhythm.

### Ease: the master formula

Master musicians, athletes, dancers or acrobats always make what they do look easy, largely because by the time you are that good at something it *is* ‘easy’.

Every athlete strives to develop greater and greater ‘maximum power and minimum effort’. Imagine putting all your might and effort into hitting a golf ball, but the ball travels only a few metres. Then an expert takes the same golf club that you used and, seemingly without any effort at all, makes the ball travel hundreds of metres.

But suppose you too can hit the ball so that it travels hundreds of metres. Apparently F.M. Alexander was particularly fond of saying this to everyone he worked with:<sup>1</sup>

When you are pleased with yourself – when you have got there, when you have made it, when you have achieved what you set out to achieve, when you have got the result that you wanted – then try it again and see if you can get the same result, but using less effort. Then, do it yet again and see if you can get the same result with even less effort than that!

This is the Master Formula in any field or activity.

<sup>1</sup> F. M. Alexander (1869–1955), originator of the Alexander Technique, a method of improving posture and movement taught in many schools of music, dance and drama world-wide.

### What is a good performance?

#### The goal is always the same

Thinking in terms of ‘pitch–sound–rhythm–ease’ is endlessly helpful in both playing and teaching because when you listen to someone play, or if you analyse your own playing, there is nothing else to think about *except* pitch, sound, rhythm and ease.

These headings are the starting-point for every question of phrasing, colour, expression, and of the mechanics or techniques involved.

Suppose you want to improve a passage of sixteenth-notes (semiquavers). You decide to work on it using rhythm practice.<sup>2</sup>

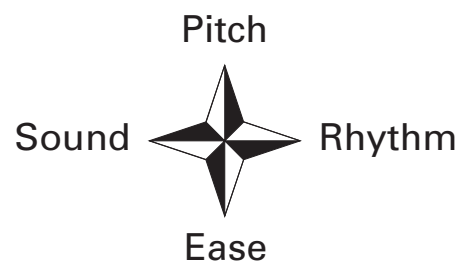
If the passage could be improved, the specific things that could be better must be something to do with pitch, sound, rhythm or ease, or a combination of them.

So you begin to practise in rhythms. So now what is the goal?

The goal remains the same, to be able to play the passage in that rhythm and in any other, with every note in tune, every note completely pure and resonant, and every note musically in time without hesitation of any sort, and all this with the minimum of physical or mental effort.

Until you can play the passage in any rhythm, with all four conditions satisfied, and at any tempo, it means there is still work left that you can do to improve it even further.

Whenever you hear someone play, or consider your own playing, thinking in terms of pitch–sound–rhythm–ease provides a perfect framework within which everything else finds its place.



<sup>2</sup> See *Rhythm practice*, page 114

### Building the bow arm

The ideal is to have a feeling of one down-bow movement, and one up-bow movement, rather than having a collection of many individual movements which you try to join together as you play.

David Oistrakh's bow arm is a classic example. There is no feeling of the different 'bits' of the bow arm in his bowing: he simply moves down-bow from the heel to the point, and up-bow from the point to the heel, as one action, with all the individual actions merged into one unit.

Sometimes, the more a student learns about the bow arm or the left hand, the worse it gets. If you start to think about the movement of the arm here, and the action of the fingers there, and during a down-bow from heel to point you try to stick everything together, there may be a danger that 'conscious interference' will get in the way of your natural feel for bowing.

Kicking a ball, you do not use your conscious mind to pull the upper leg back, and then consciously push it forward again. You know where you want to kick the ball, and how hard; you keep focused on the result you want; you let yourself kick it at the same time as making it happen.

The idea that somebody might consciously pull the upper leg back, and then add some lower leg movement, may seem absurd; yet many string players try to move the arm exactly like that.

This does not mean that you cannot analyse your bow arm and make changes to certain elements of it. Once the new habit has become unconscious, you can return to the perception of only one natural movement for the down-bow, and one movement for the up-bow.

### Forearm rotation

Forearm rotation (the forearm movement of turning a key) is something that many players do naturally, without knowing or ever thinking about it. Others do not automatically have it as part of their bow arm, or sometimes get into a habit of blocking it; but it is an easy and simple process to add forearm rotation back in to the playing.

If it is not part of your bow arm, and then you begin to allow it – or if you play repetitive exercises to encourage it – an immense new feeling of freedom immediately comes into your bow arm.

My first encounter with the idea of forearm rotation was Yfrah Neaman teaching Carl Flesch's Six Fundamental Types (see page 264). The exercise above is No. 4, and is shown in Fig. 59:

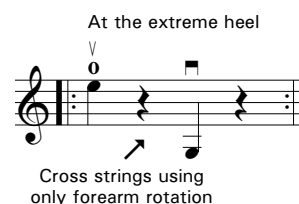
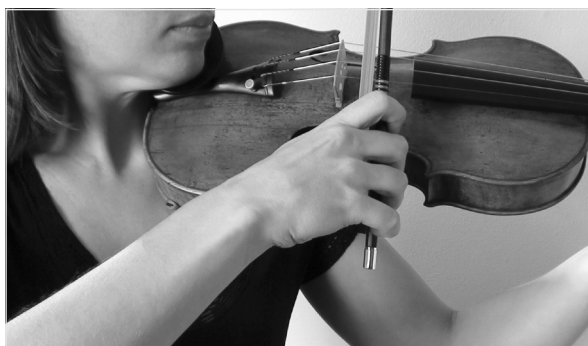
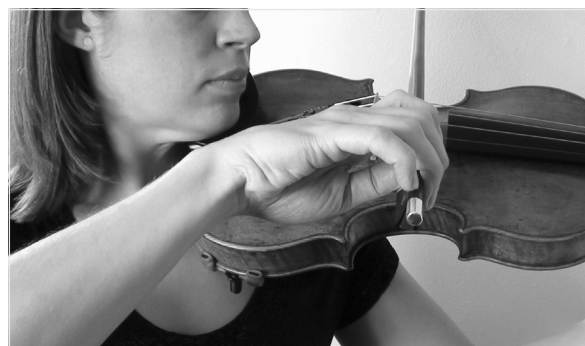


Fig. 59

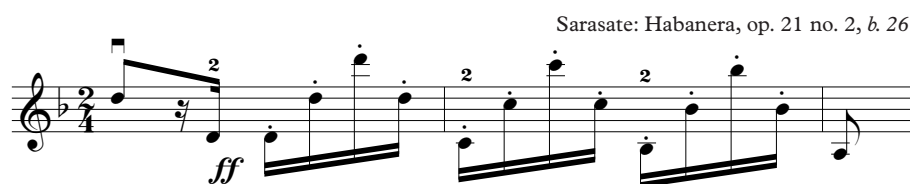


(a) Just after playing the up-bow open E



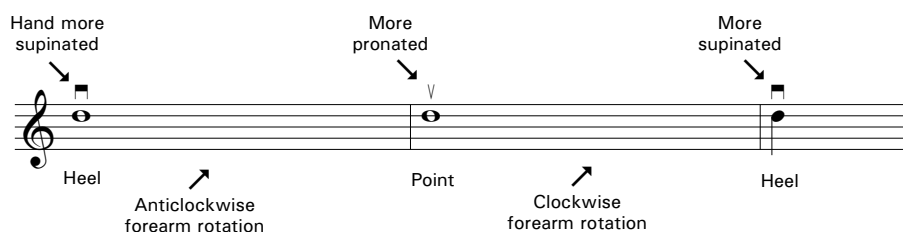
(b) Just before playing the down-bow open G

For years afterwards, I thought that forearm rotation was entirely something to do with string crossing. Passages like the following are obviously easier if you do not use the upper arm on its own, but use a degree of forearm rotation as well:

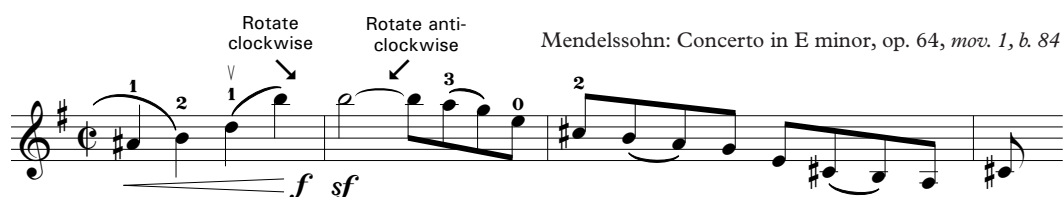


It was only much later that I realised that this turning movement is used not only in string crossing. It is something that happens all the time, in a multitude of different types of strokes.

You can see it even in the simple operation of drawing the bow from the heel – where the hand is more upright (supinated) – to the point, where the hand is more tilted (pronated):



Obviously the amount of the movement may be so slight as to be imperceptible:



## The changing contact of the first finger with the bow

The first finger's changing point of contact on the bow is a key element of forearm rotation.<sup>1</sup>

- Playing at the heel, the forearm has rotated clockwise and the first finger contacts the bow closer to the first joint (Fig. 60a).
- At the point, the forearm has rotated anticlockwise and the first finger contacts the bow closer to the middle joint (Fig. 60b).

The changing contact-point of the first finger, and forearm rotation, have a clear effect on one another: if you keep the contact-point of the first finger fixed in one place, forearm rotation is prevented and the wrist has to bend excessively instead (Fig. 60c).<sup>2</sup>

<sup>1</sup> See *The changing contact-point of the first finger on the bow*, page 42

<sup>2</sup> See *Excessive right wrist movement*, page 193



(a) Forearm rotated right



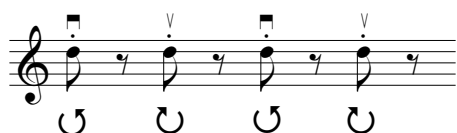
(b) Forearm rotated left

**Fig. 60**

## Lifted strokes

Forearm rotation is also a key part of lifted or springing strokes. The actual amount may be so little you cannot see it. Exaggerate the movement once or twice, so that afterwards an imperceptible amount happens naturally, on its own, without your being aware of it.

The arrows indicate anticlockwise and clockwise forearm rotation:



(c) Note the excessive wrist movement if forearm rotation is prevented

- The *spiccato* movement into and out of the string is curved: follow that curve invisibly with forearm rotation.

# Avoiding aches and pains

## lesson 7

The basis of all playing must be balance and physical freedom. All too often we spend our practice time working on problems of the left hand or right, when actually what we need to do first is to find a basic balance and freedom throughout our entire system. Then everything works much more easily in the first place.

General tension throughout the body often begins with the neck and shoulders, and tension there has to spread to the arms and then to the hands and fingers. Then it can become less and less productive to practise problematic passages over and over again, trying to get them sounding well and in tune, if the basis of the playing is not one of freedom.

While it may seem very difficult to find such a basis of freedom if you do not already have it – and if it seems that you already have enough to think about just trying to get around the notes – in fact there are certain key issues which make an enormous difference, and more freedom can be gained very quickly indeed.

### Understanding the causes

#### Listening to your body

Imagine that you are busy practising, and the fire alarm goes off. You do not ignore the alarm, saying, ‘I have important work to do, I can’t stop now.’

Pain is your personal fire alarm going off. Yet many string players, hurting with every note they play, ignore warning signals and carry on playing in the same way. A common approach to practice is this:

First I have to learn how to play this piece; then I will learn how to play it without getting tense.

I know that all these things my teacher tells me about being balanced in my posture, not squeezing my fingers together, relaxing my shoulders, not pulling my chest down, not squeezing my left thumb back, and so on, are all the right things; and one day I will be able to use all this helpful information, and then I will be glad that I learnt it now.

But meanwhile I can’t think about it because if I play in all those relaxed, balanced, non-squeezing ways, I simply cannot play; or if I can, my playing seems boring and uninvolved and unmusical; but if I forget about them, and just play as I have got into the habit of playing, I can play at least quite well.

I can ignore the pain in my left upper arm, and I can still get through the piece even if I am tense. One day, when I can play it and all my worries with it are over, then I will learn how to play it in the way that my teacher is suggesting.

This approach often fails for the simple reason that until you find a way of playing without tension and conflict, you never do reach the stage where you can play it easily anyway.

#### Forming good associations

From the very beginning of learning a new piece, build good posture, balance and freedom into the musical playing of the notes.

Just as you have a muscle-memory of the feeling of beginning a piece on a down-bow or an up-bow, so that it becomes impossible to begin accidentally on the wrong bow when playing from memory, so do undesirable physical actions (such as tightening) become associated with playing a particular note or phrase. Then that tightening becomes part of how you play that phrase, even if you have got yourself into a generally relaxed state beforehand.

If you form an association of bad posture or tension with the phrase, it becomes more and more difficult to change to a new way of playing without the musical playing suffering. Then you may become reluctant to make the change.

## Freeing the shoulders

### Raising or not raising

The most common advice is that you should not raise your left shoulder in holding the violin. However, it may feel unnatural and inhibiting if you do the opposite and purposely 'keep the shoulder down'. Dounis recommended a buoyant, mobile feeling in the shoulder:

Lift the [left] shoulder slightly. The shoulder will then support the weight of the arm. Otherwise the weight will be in the elbow where it is a burden.<sup>1</sup>

<sup>1</sup> Valborg Leland: *The Dounis Principles of Violin Playing* (New York, 1982), 39.

Imagine that someone about your height is standing in front of you. You reach forwards with both arms to embrace them. Notice what you do with your shoulders as you reach forwards.

- It does not feel natural to force your shoulders to stay down, without any movement whatsoever, so that only your upper arms move (Fig. 108a).
- Nor do you 'raise' the shoulders, i.e. the same movement as shrugging (Fig. 108b). What happens naturally is that your shoulders 'come up' without being raised (Fig. 108c).
- This is a perfect model for what to do with the shoulders when playing the violin. (Fig. 108d, Fig. 108e, Fig. 108f). Of course, the correct height and position of any shoulder rest is crucial.<sup>2</sup>

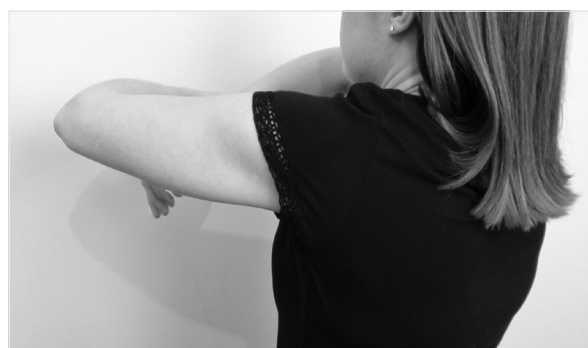
<sup>2</sup> See *Using a shoulder rest*, page 27

The Alexander teacher Walter Carrington, after listening to a discussion about the left shoulder at a violin teachers' forum, said: "Instead of thinking about raising the shoulders, or not raising the shoulders, why don't you just keep the shoulders free?"

**Fig. 108**



(a) The shoulders forced down unnaturally



(b) Raising the shoulders



(c) The shoulders are active



(d) The shoulders are too low



(e) The shoulders are too high



(f) The shoulders are 'up but not raised'



## The shoulder and the elbow

It is often helpful to a student to understand the difference between the movements of the arm at the elbow and at the shoulder.

The elbow is called a hinge joint. The forearm can move only backwards and forwards on a horizontal plane, when held level with the floor. If it appears that the forearm can also move up and down, this is due to the upper arm rotating.<sup>1</sup>

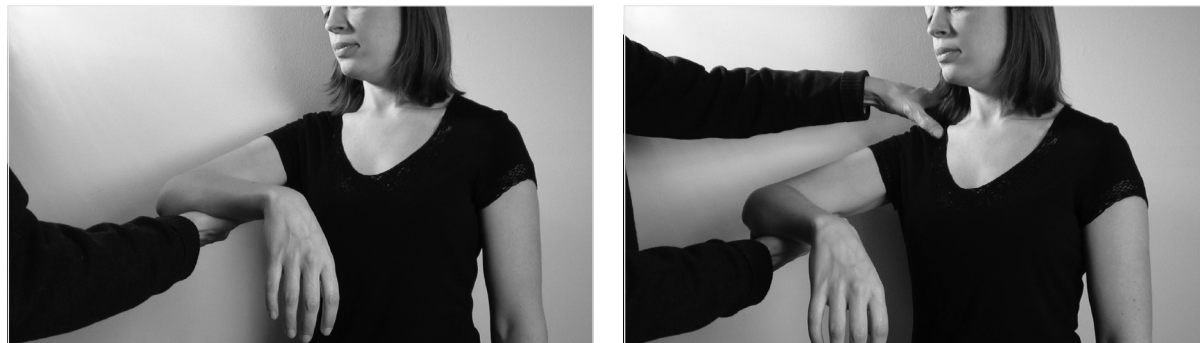
The shoulder is called a ball-and-socket joint. The upper arm has the possibility of both horizontal and vertical movements, with a combination of these producing a circular movement.

### Teacher or assistant

- With your right hand, take the complete weight of the arm at the elbow joint (Fig. 109a).
- Place your left hand on the shoulder to encourage it to keep still. With your right hand move the upper arm in circles to demonstrate the freedom of movement in any direction (Fig. 109b).

### Student

- ‘Flop’ the weight of your arm into the supporting hand. Do not make any movements yourself.
- Allow the arm to be moved in any direction, feeling it move within the shoulder socket without any movement whatsoever in the shoulder itself.



(a) Take the complete, flopped weight of the arm in your right hand

(b) Move the upper arm in circles with your right hand

Fig. 109

## Keeping the shoulder down and the elbow up

One of the things children often have difficulty with is keeping the right elbow supported without raising the shoulder. Often, if their elbow is too low (Fig. 110a) and you ask them to raise it so that it is level with the bow, they raise the shoulder too (Fig. 110b). If you then ask them to drop the shoulder, the elbow drops too (Fig. 110a). They need to learn how to do one without the other (Fig. 110c):



(a) The elbow is too low

(b) Unintentionally raising the shoulder as well as the elbow

(c) Elbow level with the bow

Fig. 110

## Freeing the left hand

### Understanding flexibility

You do not need to try to develop ‘flexibility’ in your hands and fingers. You already have it most of the time. Whenever you are not playing, and engaged in ordinary, everyday activities, your hands are soft, relaxed and pliable.

What you must do is keep that softness and flexibility when you play the violin. Instead, many players go through the following process:

<sup>1</sup> Curiously, although forearm rotation is a standard term in violin playing, upper arm rotation is rarely ever mentioned throughout the whole of the violin literature. One exception was the American teacher Paul Rolland, who used pegs attached to the students’ clothes to graphically illustrate the rotation of the forearm or upper arm

- 1 Before you pick up the violin and bow, your hands and fingers are soft and flexible, i.e. no muscles in the hands or fingers are in a constant state of contraction.
- 2 Every time you are just about to play, first you tighten (i.e. contract) the muscles in your hands, fingers, wrists and arms, so that they feel hard and inflexible.
- 3 You spend many years doing relaxation exercises on the violin, forever trying to build freedom and ease, relaxation and release into your technique and general playing.

Instead of this, why not miss out stages 2 and 3? Your hands are soft and pliable before you pick up the instrument; keep them like that as you go to pick up the violin and bow; then keep them soft and pliable as you move your fingers around the fingerboard and manipulate the bow.

**Q** But aren't children's muscles naturally softer, unspoilt by years of tension, so that if they are taught good technique at an early age they will never develop tension in the first place? Therefore isn't it a much more difficult matter for an older person somehow to undo the tensions they have built up over the years?

The 'build-up of tension over the years' is often an illusion. Tension may feel the same as it did last week and be in the same place, but it is not the same tension. It is more that over the years you build up a long history of being in the habit of contracting certain muscles, i.e. tensing them.

We tend to think: "There is that tight feeling again that is always there," as though it is the same tension that we had last time and now have to deal with again. In fact contracting the muscles, or allowing them to release and lengthen, is something that happens in the present, in the here-and-now.

Most children do not naturally and automatically hold the bow without tension, or move their fingers on the strings without tension. You can prove this with a simple experiment.

- Ask a young child to stand, without the bow, with their right hand relaxed and 'floppy'. Very slowly bring a bow towards their hand: in almost every case they will stiffen their hand and fingers (contract the muscles) in preparation as the bow approaches their hand.
- You can do the same thing with their left hand. Ask them to stand with the violin under the chin, but the left hand down and away from the neck of the violin. Make sure their hand is completely soft. As they move their hand towards playing position, notice how in most cases the hand tightens on the way to the neck and arrives in a state of hardness; and that is before they have pressed the string down too hard and counter-pressed with the thumb, which causes even more tension.

As an adult, the difference is that you have self-motivation and will-power at your command, and can guide yourself to the desired result quickly.

### Continual moments of release

Take every opportunity to release and soften the hand. One of the key relaxing moments to take advantage of, is when you play an open string.

- Make sure that your hand does not remain 'active' when playing an open string (Fig. 111a) – after all, there is nothing for it to do. The hand can release completely (Fig. 111b):

Fig. 111



(a) Tight, contracted hand



(b) 'Open', released hand while playing an open string

# The vibrato lesson





# lesson 10

String players have used vibrato since the earliest times. In 1756 Leopold Mozart's instructions for playing his first 'division' of the bow included to use vibrato:<sup>1</sup>

For if we strike a slack string or a bell sharply, we hear after the stroke a certain wave-like undulation (*ondeggiamento*) of the struck note. And this trembling after-sound is called tremolo...Take pains to imitate this natural quivering on the violin, when the finger is pressed strongly down on the string, and one makes a small movement with the whole hand; which however must not move sideways but forwards toward the bridge and backward towards the scroll.

<sup>1</sup> Leopold Mozart: *A Treatise On The Fundamental Principles Of Violin Playing* (Augsburg, 1756; Eng Trans. Editha Knocker, Oxford, 1948), 98.

The German violinist Louis Spohr (1784–1859), speaking about vibrato in his *Violin School* (1831), does not mention changing the width of vibrato, which 'should only be slight, in order that the deviation from purity of tone [intonation] may scarcely be observed by the ear'.

But he lists four chief speeds of 'tremolo': 'The quick tremolo is indicated , the slow , the gradually accelerating , and the gradually slackening .' Spohr used vibrato only on selected long or important notes, and marked these symbols over the notes in the music.

A picture of the general use of vibrato in 1908 was given by the Scottish violinist and teacher James Winram.

There should be no close shake [vibrato] in exercises or scales, other than melodic exercises, and it should be judiciously used at all times, as it is quite possible to have too much of a good thing. Beethoven's music will sound lovely with very little close shake, or if preferred with none at all; whereas Wagner's will gain rather than lose by its introduction. The character of the music must be taken into consideration, and good taste will surely be a sufficient guide. There are many who contend that the close shake should never be used, but when we consider that the world's greatest violinists all use it more or less, it surely must have some virtue.<sup>2</sup>

<sup>2</sup> James Winram: *Violin Playing and Violin Adjustment* (Edinburgh and London, 1908), 34.

## What should vibrato sound like?

### Speed and width

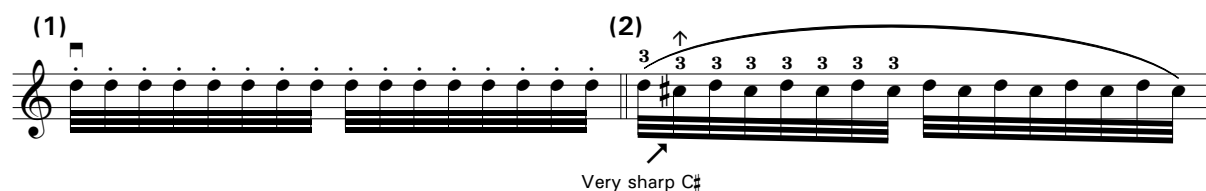
The two main factors of vibrato are speed and width. By varying only these, without doing anything else, you can already produce a great variety of different colours.

Then, once you add different degrees of finger pressure, different areas of the fingertip or pad, or different degrees of speed within the vibrato (the forward movement of the vibrato is faster than the backward movement, i.e. you stay on the principal note longer) an infinite range of colour contrast opens up.

### Q How wide should it be? How fast should it be?

You cannot say exactly how vibrato should sound, since no two are the same.<sup>3</sup> However, we can hear in the vibrato of the great players that what they have in common is the ability to play a vibrato that is 1) very narrow, and 2) very fast. Of course this is not always musically required, and it is no good if the vibrato sounds 'nervous' or neurotic; but still, even the basic, middle-of-the-road vibrato of top players, before they add intensity, is never slow.

A good model to aim for in vibrato is *sautillé*, where the same pitch is repeated rapidly, rather than thinking of vibrato as being like a very narrow trill:



(1) 'Sautillé-like' vibrato sounding like DDDDDDDD

(2) 'Trill-like' vibrato sounding like D, then the note a quarter tone or so below, then D again. The note 'wobbles'. Some players call this vibrato 'wobblato'.

<sup>3</sup> Carl Flesch used to point out that if any two famous violinists stand behind a screen, and take it in turns to play the same phrase on the same violin – without vibrato – you would never be able to tell who was playing.

But the moment they play the phrase with vibrato, you know immediately when it is one player and when it is the other. Vibrato is something unique, like a fingerprint. It is one of the most distinctive elements of your playing.

## Four basic groups

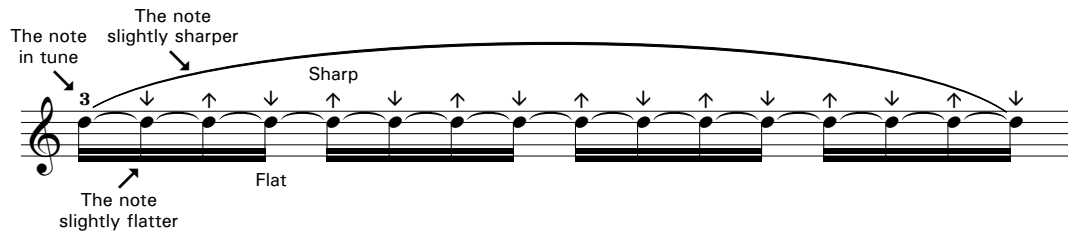
There are four basic groups of vibrato. Elements of all the groups can be found in each player, of course, since nobody has only one vibrato that they use whatever the composer, the phrase, the notes, or the particular finger; but dividing into these groups serves as a useful starting-point for understanding vibrato.

Each of the following examples represents one legato whole-note (semibreve); the note-values represent the movement of the finger as it rocks backwards and forwards on the string in vibrato.

### Group 1

This is a vibrato that you can rarely use because it makes it sound as though you are playing out of tune.

In this vibrato, the finger moves around the principal note, above and below it, i.e. moving between a pitch fractionally sharper and one fractionally flatter than the principal note:



The problem with this vibrato is that the audience's ear catches the upper pitch of a vibrato rather than the lower pitch, and thinks that it is the principal note. So playing, say, D $\sharp$ , which should ordinarily be in tune with the open D, it comes out sounding as though you are playing sharp, even if the finger actually stopping the note is exactly in tune.

Therefore, the rocking movement of the finger should not go above the pitch of the principal note. To an extent you can get away with the sharpening effect of this vibrato when playing sharps or flats because there is often a range of tunings for these notes, sharper or flatter, which are all still in tune.

### The test that proved the wrong result

It is often believed that vibrato takes the finger both above and below the pitch of the principal note. There is a story, perhaps apocryphal, that one reason for the myth continuing to flourish is because of a test done in the early 1960s.

Apparently, an experiment was set up using an oscilloscope – a scientific device that looks a bit like a small television screen. When a sound is played into the machine, patterns and sequences of moving lines form on the screen representing that sound.

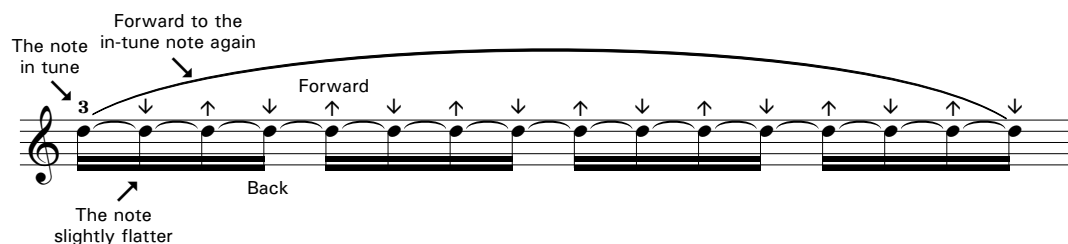
This experiment satisfactorily proved that the pitch of the vibrato did indeed go above and below the principal note. The only trouble was that they used an operatic bass singer for the test – not a violinist or other string player – and this singer had a vibrato that was about a major second wide. The actual note was somewhere in the middle of it.

This myth persists to the present day. In a recent book on violin technique (1998) the author states the incorrect perception clearly and says: "The width of a vibrato movement should be the same below and above the basic notes."

Yet there is no doubt that if you vibrate sharp of the note, it will sound as though you are playing sharp. You only have to stop and listen to an in-tune note played without vibrato, and then with vibrato, to know that the vibrato cannot go above the principal note.

### Group 2

In this vibrato, the finger rocks between the principal note, and the same note fractionally flattened:



While clearly better than the too-sharp intonation that the previous vibrato causes, this is still not a vibrato that you can use often. It may sound too 'wobbly', because the lower pitch of the rocking movement is as audible as the pitch of the principal note. This is because the rhythm of the forwards and backwards vibrato movement is even, not a dotted movement – see Group 3.

## Leading with the vibrato

When you play any sort of accent with the bow, it is usually desirable to make a vibrato accent at the same time; and to feel the start of the vibrato as an impulse that launches the bow.<sup>1</sup>

<sup>1</sup> See *One of the secrets of artistry: leading accents from the vibrato*, page 259

Then there is a feeling of the two hands working together as one. You forget about the bow and focus only on the vibrato, and the bow stroke takes care of itself.

In the same way, you can feel the placing of the bow on the string at the point, and the beginning of the vibrato, as if they are one thing.

- Get ready to start by hovering the point of the bow half a centimetre above the string.
- Forget about placing the bow on the string and focus only on beginning the vibrato, and allow the bow to take care of itself and place itself on the string perfectly.

## Practising it

- Add a couple of minutes of ‘up-bows at the point’ to your warm-up. Cover a wide range of different notes, positions and strings:

Slow (At the point)

*pp*

Repeat several times

*pp*

etc.

- Remember to experiment with different amounts of hair, from beginning on the outside edge of the hair (bow tilted towards the fingerboard) to beginning with full hair.

## How can I improve lifted strokes like *spiccato*?

There is often confusion about what lifted strokes actually are, partly because different terms are used to describe the same strokes: ‘lifted’, ‘springing’, ‘bounced’, ‘off-the-string’, are often used interchangeably, as are (incorrectly) the words ‘*spiccato*’ and ‘*staccato*’.

- Playing ‘on the string’ means that the bow-hair remains on the string at the end of a stroke as the bow begins to move in the opposite direction to begin the next stroke.
- Playing ‘off the string’ means that the bow-hair lifts above the string at the end of one stroke, before landing on the string again to play the next stroke.
- However, although when you play ‘on’ the string the bow-hair never leaves the string, when you play ‘off’ the string the hair does not always leave the string.

While it may *sound* as though the bow-hair is bouncing off the string, actually it may not be. There is a type of brushed *spiccato* in orchestral playing called ‘onff’, (a combination of ‘on’ and ‘off’) where the hair does not leave the string. Playing *sautillé*, the hair may leave the string or it may not.

The hair clearly leaves the string during shorter *spiccato*, *ricochet*, and flying *staccato*. It stays on the string during solid *staccato*.

## The bow wants to bounce

### Bounced strokes are more natural than sustained strokes

Many players have a thought at the back of their mind that bounced strokes like *spiccato* are more difficult or complicated than playing on (along) the string.

This idea may go all the way back to their first experiences of playing the violin at an elementary level. At that time, playing on the string seems straightforward:



For the beginner, playing the same notes *spiccato* may seem more difficult to control:

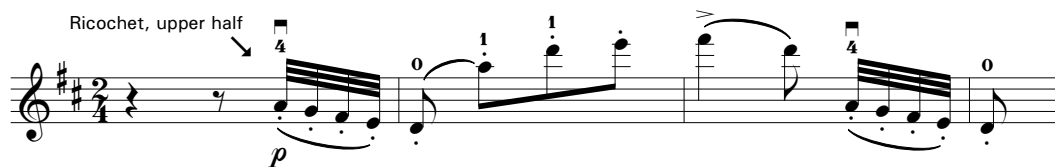


*Sautillé* seems an advanced, difficult stroke:

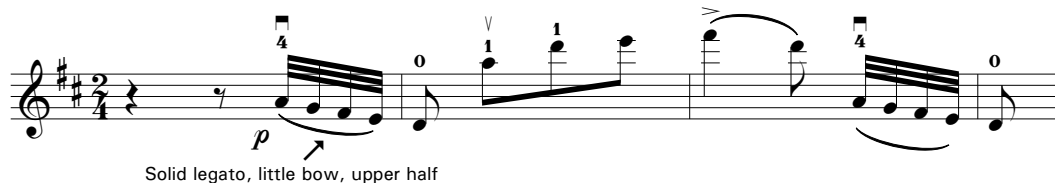


*Ricochet* may seem impossibly advanced:

Paganini: Concerto no. 1 in D, op. 6, *mov.* 3, *b.* 2



Yet actually the most important aspect of these bowings is that the bow *wants* to bounce. If Paganini had written *legato* instead of *ricochet*, the passage would actually have been more 'difficult' – despite the appearance of virtuosic brilliance that the *ricochet* gives – because if you play it *legato* you would have to 'do' something to keep the bow solidly in the string:



You can easily demonstrate the natural bounce of the bow:

- Feel the springiness of the wood (Fig. 138a), the hair (Fig. 138b) and the string (Fig. 138c). When any of the three are stretched, all they want to do is spring back into their state of least tension.

# Background essentials 3

# lesson 12

## Scales and arpeggios

### Why practise scales?

#### Putting off practising scales as a student

It took me a long time to realise how beneficial it is to be able to play scales and arpeggios as well as if they were part of a concert performance of a concerto, sonata or concert piece. Like most students I always used to put off practising them. Whereas you cannot get away with missing something like your school homework, if you have not practised your scales it is undetectable, especially if you are rarely asked to play them in the violin lesson. So it was all-too-easy to put off practising scales, and of course weeks soon turn into months, which then quickly turn into years.

There were scales in the regular examinations, but like many students I would always leave practising them until the last minute, until I no longer had any choice and simply had to. The scale practice would peak on the day of the exam, and then stop until the next time when again there would no longer be any choice. Then once you have finished studying, nobody ever asks you to play a scale again.

#### My first ten years of playing and teaching

After I had stopped studying I continued all the work on basic mechanics I had done as a student, i.e. exercises for tone production, shifting, string crossing, intonation, and so on. As part of that work, once or twice a year I would go through a brief phase of practising scales. Each time I was pleased to see that they had improved a lot since the last time, without having practised them at all in-between.

I would find I could play a scale in thirds more in tune, faster, and with a more relaxed hand, than ever before; but all I had done was practise exercises in thirds. Four-octave scales would be far easier than before, but only because I had practised shifting exercises and finger patterns at the top of the G string.

As a teacher at that time I would rarely ask a student to play a scale either. I reasoned that since the scale was made up of specific elements, e.g. moving the fingers freely, changing position lightly and inaudibly, smooth string-crossing, and so on, it made more sense to work on those things directly rather than in a scale – after all, if the student had problems shifting, or had stiff fingers or did not play with a singing tone, how could they play a scale well if it was itself made up of those elements?

So I would work with them on basic technique and only work on scales around the time of their scale exams. Again, I was always pleased with their progress and would marvel at how their scale-playing would improve. The scales always got better on their own. Later, I was delighted to discover that Dounis had had exactly the same approach, and also preferred working on the elements of the scales rather than on the scales themselves.

#### Getting the best of both worlds

Another support for this approach to scales was that although some players or teachers saw scales as the cornerstone of technique, others doubted whether there was any point in playing them at all.<sup>1</sup> So by not practising them, but by improving them anyway, I thought that I was getting the best of both worlds.

There was also the point that even great violinists would not necessarily be excellent at playing scales. In a famous story about Henryk Szeryng going to play to Jascha Heifetz, he turned up to the lesson ready to play a selection of big concertos. But Heifetz was not interested in hearing any of them. First he wanted to hear a three-octave scale. That was the real test.

When I was a student, a friend who had recently won an international competition said to me, 'If you ask me to play the Brahms Concerto to you I would be perfectly happy; if you asked me to play a three-octave scale in C major I would fall flat on my face!' She is an excellent violinist, I reasoned; so if I don't practise my scales it does not mean my career need suffer either.

<sup>1</sup> I once asked the Austrian pianist Alfred Brendel, having just heard him play a late Schubert piano sonata at the age of 78 with superb technical control, how he kept his technique in such excellent condition. Did he practise scales and exercises? No, he said, he had never played scales or exercises in his whole life. He practised everything from the point of view of musical control, trying to find how to make the music sound as he wanted it to, and all the technique came from that.

The Israeli pianist Daniel Barenboim says that practising scales is positively bad for you since when you come to a scale in a piece you might play just a scale rather than music.

(But scales are full of inner musical tensions and resolutions. I'd bet the same people who play a "scale" instead of "music" would probably play in the same unmusical way, even if they did not practise scales!)

**Exercises–scales–studies–pieces**

Finally I began to realise how good it is to practise scales and arpeggios themselves. After all the building work of practising the elements – shifting, intonation, string crossing and so on – the next step is to practise scales and connect everything into a streamlined whole. There is simply nothing to replace what regular scale-practice brings.

All the previous ideas about saving time by practising the elements separately are obviously correct, but what I had not fully realised was the benefit that comes into the whole of your playing when you do practise scales regularly. Practising scales in the same key as the piece you are playing is also one of the best ways to improve overall intonation in the piece, and the evenness of all the playing quickly increases.<sup>1</sup>

<sup>1</sup> One of David Oistrakh's last concerts in London was a performance of the Beethoven concerto in the Royal Albert Hall. The rehearsal finished at 1.00, but Oistrakh remained on stage for the entire afternoon practising slow, three-octave scales and arpeggios. He wanted to play the concerto in tune, which is not necessarily easy even if you are a player on his level.

**How is a scale when it is played well?**

While part of the art of scale-playing is to play them musically, at the same time the most important goal is machine-like evenness and regularity. When a scale is played well the three main pillars of music – pitch, sound and rhythm – are all completely even:

- The intonation is even, the same note-names not sharper or flatter in different octaves. The notes are evenly spaced, e.g. in the major scale the whole tone from the first note to the second is not wider (aurally) than from the second note to the third.
- The sound is even. No note is louder or softer than its neighbour, and remains even in tone for however long each note lasts.
- The rhythm is even.

Be extra careful to maintain evenness of tone and rhythm at three crucial places:

- 1 Before or after a change of bow
- 2 Before or after a change of string
- 3 Before or after a change of position.

The top of the E string, where the string becomes short and the bow has to sit close to the bridge (though not too heavily), requires great evenness of bowing.

<sup>2</sup> See *Finger preparation: the secret of legato*, page 145

Extra factors that make rhythm uneven are fingers not being ready for the new string,<sup>2</sup> and fingers lifting off too soon when descending.<sup>3</sup>

<sup>3</sup> See *No. 5*, page 219

Yfrah Neaman used to say that the ideal in melodic playing would be to play on one string, in one position, with one finger, and with one long bow that never comes to an end. Then playing the violin would be like singing, where all that the singer has to do to create a long, seamless line is one thing: exhale.

Playing the same long, seamless line on the violin is more difficult because the line is so easily broken up into little, unmusical bits by all the constant changes that happen – changes of string, position, finger and bow direction.

**Practising the elements of the scale****Holding down the first and fourth fingers**

- Keep the first finger down on the string all the way up to the top of the scale and back down again to the end. The only time you need to lift the first finger is to place it on the next string.
- Ascending, hold down the fourth finger while playing the first finger on the new string.

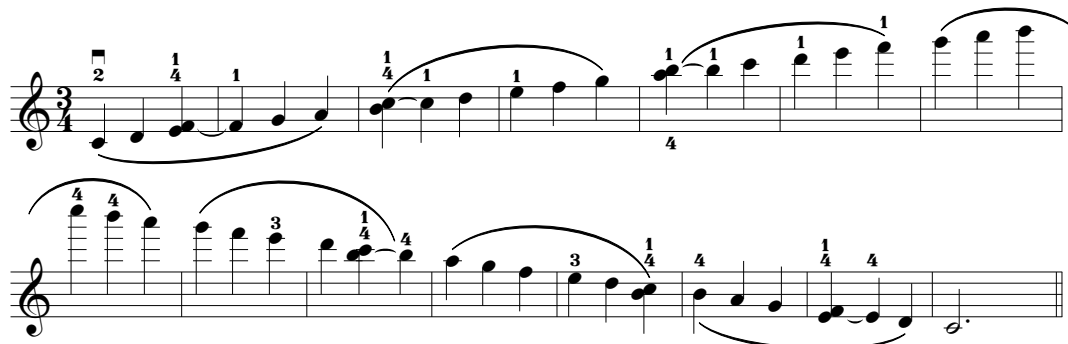
The image shows two staves of musical notation for a scale exercise in G major (one sharp), 3/4 time. The first staff is an ascending scale starting on G4. Fingerings are indicated by numbers 1-4 above the notes. The second staff is a descending scale starting on G4. Fingerings are indicated by numbers 4-1-2-3-4 below the notes. A note marked with an 'x' is labeled 'x-note = first finger ready on string'.



Holding down the fourth is called overlapping. As well as helping to bind the string crossing together smoothly and seamlessly, holding down the fourth also helps in keeping the fingers above and close to the strings, curing any habit of raising them too high or too far away from the neck.

### Double stopping string crossing is good for both hands

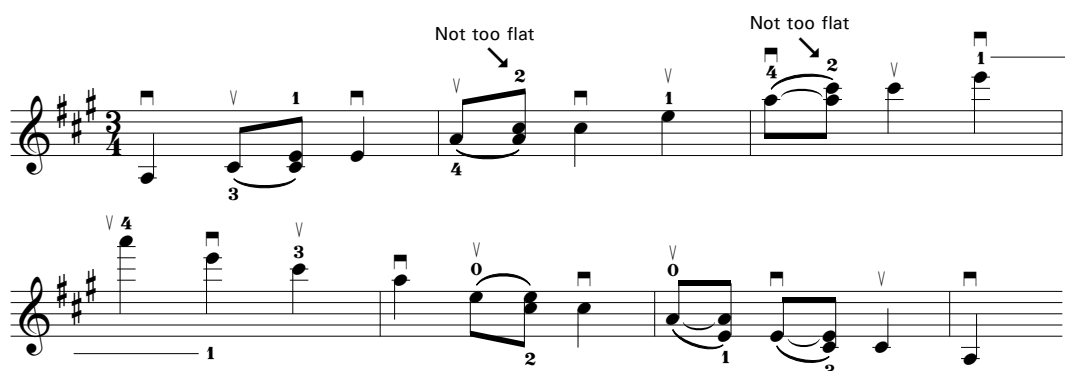
Make scales both feel and sound very smooth by double stopping the string crossings. This forces the left fingers to prepare, and the bow to move early to the next string – instead of it moving too suddenly and ‘bumping’ on to the string:



Double stopping the string crossings in arpeggios is helpful for the same reasons. However, it may cause intonation problems if you make the resulting intervals in tune as double stops: the tuning of a note played on its own is often different from how it would be tuned if played as part of a double stop.<sup>1</sup>

<sup>1</sup> See *The difference between single-stop and double-stop tuning*, page 90

- Tune the notes the same as you would in the normal arpeggio:



In this example none of the double stops are a possible problem except the ones marked in the first line. If the ‘third tones’ of these major thirds were to be in tune, the C#s would have to be played very low; but that same low pitch for the C#, played on its own in the arpeggio, would sound much too flat and the arpeggios would seem dull and lacking brilliance.

### Half of forty-eight is twenty-four: the mumble strategy

The educational reformer John Holt used to show how children use all kinds of tricks and strategies, in the classroom, in their efforts to please their teachers or to stay out of trouble if they do not know something. In *How Children Fail* he tells a story about Emily, aged nine:

The question arose the other day, ‘What is half of forty-eight?’ In the tiniest whisper she said, ‘Twenty-four’. I asked her to repeat it. She said, loudly, ‘I said,’ then whispered ‘twenty-four’. I asked her to repeat it again, because many couldn’t hear her. Her face showing tension, she said, very loudly, ‘I said that one-half of forty-eight is...’ and then, very softly, ‘twenty-four.’ Still, not many of the students heard. She said, indignantly, ‘O.K., I’ll shout.’ I said that that would be fine. She shouted, in a self-righteous tone, ‘The question is, what is half of forty-eight. Right?’ I agreed. And once again, in a voice scarcely above a whisper, she said, ‘Twenty-four.’ I could not convince her that she had shouted the question but not the answer.

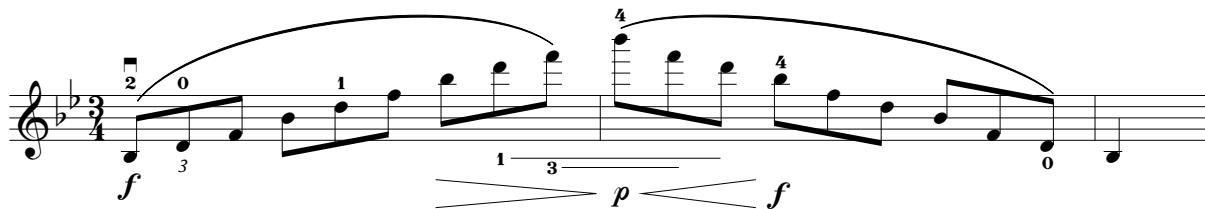
Of course, this is a strategy that often pays off. A teacher who asks a question is tuned to the right answer, ready to hear it, eager to hear it, since it will tell him that his teaching is good and that he can go on to the next topic. He will assume that anything that sounds close to the right answer is meant to be the right answer. So, for a student who is not sure of the answer, a mumble may be his best bet. If he’s not sure whether something is spelled with an a or an o, he writes a letter that could be either one of them.

The mumble strategy is particularly effective in language classes...<sup>2</sup>

<sup>2</sup> John Holt: *How Children Fail*, (1964)

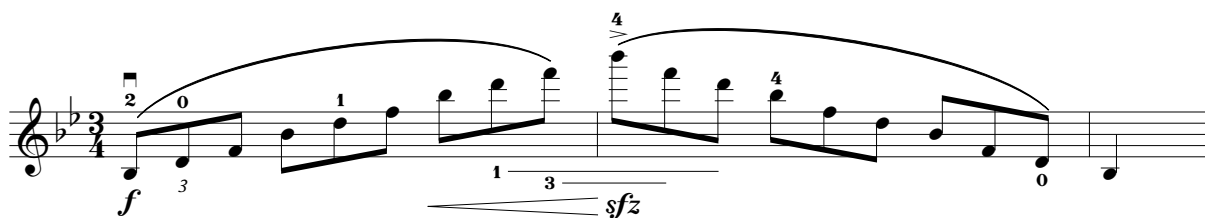
Exactly the same thing is happening when you hear scales or arpeggios played like this:

**Example 1**



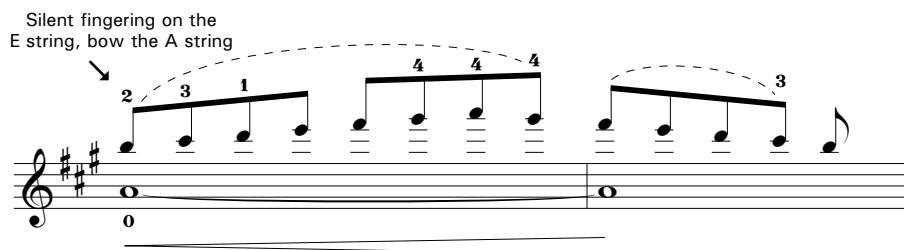
Playing in safe, familiar, secure, 1st position is like saying ‘Half of forty-eight is’; playing at the top of the E string, where you might easily play out of tune or make a scratch in the sound, is like having to state the answer.

- Do the opposite to correct this. Practise exaggerating the arrival to the top:



<sup>1</sup> See *True-legato warm-up exercise*, page 261

Another way to practise this is to finger on one string while bowing on another.<sup>1</sup> Take the last part of the scale and finger it while bowing smoothly and evenly on the A string.



You can also do it the other way round, bowing on the E string while fingering on a lower string. Bowing on another string has as good an effect as bowing on the one that you will actually play after doing the exercise.

**Example 2**

There may be certain chords more difficult than the others, and caution may make a passage come out as follows:

J. S. Bach: Sonata no. 1 in G minor, BWV1001, *Fuga*, b. 4



- Practise by doing the opposite. Play the rest of the passage normally, or a little more gently than usual, while playing the avoided chords extra loud and extra long:



## Chromatic scales

### Slow and fast fingering

While there are many ways of fingering the chromatic scale up or down the E string, in 1st position there are two fingerings: the sliding fingering 1–1, 2–2, 3, 4, and the shifting fingering 1, 2, 1, 2, 3, 4:

Slow fingering

Fast fingering

While the sliding fingering is sometimes seen as old-fashioned and the shifting fingering modern, it may be better to call them the slow and the fast fingering. 1–1, 2–2 is more melodic and expressive, and 1, 2, 1, 2 more mechanical and functional.

#### Example 1

Fast fingering

Slow fingering

If played *prestissimo*, passages like this feel awkward with the slow fingering.

#### Example 2

Tchaikovsky: Concerto in D, op. 35, *mov. 1*, b. 40

*mf*

Even a passage as fast as this may be played with the slow fingering, which offers an alternative range of expression to the more straightforward, functional (though equally effective) 1–2–1–2 fingering.

### Keeping the thumb in one place

In the fingering 1–2–1–2 the thumb should not change its position on the neck of the violin. Playing the first-finger G# and second-finger A, the hand is in half position; playing first-finger Bb the hand is now in 2nd position; playing second-finger Bb the hand is in 1st position again. Keep the thumb in one place so that the hand stays in 1st position throughout. Otherwise the hand can lose its orientation and intonation suffers.

### Practice method: missing out the second finger

The two most common fingerings for playing the chromatic scale up the E string are 12, 12, 12 and 123, 123, 123.

Coming down, the usual fingering is 321, 321, 321.

Many players find this 123 or 321 fingering uncomfortable because of the way the hand has to contract. After playing two semitones with this fingering, the first and third fingers are a tone apart in spacing. The usual feel in the fingers is of a minor or major third between the first and third fingers.

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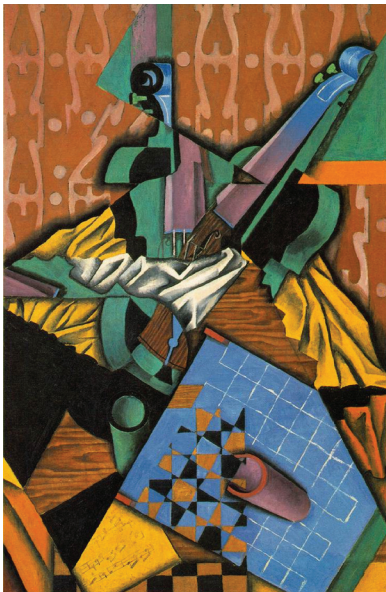
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