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## NEWS FOR CELLISTS AUTUMN 2012

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### *Sound Post Cracks*

We shed some light on the issue of sound post cracks in our article on pages 2-3, discussing their structural and tonal significance, the process by which they are professionally repaired and the effect of a sound post crack on the value of a cello.



### *Cellist's Charity Swim*

On 12<sup>th</sup> August, cellist Yvonne-Marie Parsons and two friends donned their wetsuits and swam from Southsea to the Isle of Wight, accompanied by friends in three kayaks and a safety boat. Their route took them across two of the busiest shipping lanes in the world and they battled with seasickness, exhaustion, disorientation and adverse wind and tides during their four hour, six kilometre crossing. When asked how she coped, Yvonne said that she practiced difficult passages from cello concertos in her head as she swam.

The purpose of the swim was to raise funds for the Royal Society of Musicians who gave Yvonne £2,000 ten years ago to consult a pioneering immunologist in Copenhagen. Yvonne has long dreamed of giving this money back to the RSM so that they can help someone else in need and £4,207 has already been raised. If you would like to make a donation, please visit <http://www.charitygiving.co.uk/solentswim>

### *Travels with a Pedrazzini*

This June we were asked to sell a beautiful Giuseppe Pedrazzini cello through the Cello Exchange. After thirty happy years with the cello, the owner was approaching retirement and had decided that it was time to find a new owner for her much-loved instrument.

Just a few days after listing the cello on our website, we had an enquiry from a cellist in Japan who had long wished to own a cello of this quality. We sent him a detailed condition report and Robin also visited another Pedrazzini cello so that he could compare the two instruments. Although the cellos were built on different models, they were unmistakably by the same hand.

The interested cellist visited Ely in late June and decided to buy the Pedrazzini if we could obtain a certificate of authenticity on his behalf. We decided to take the cello to the acknowledged world expert in modern Italian violin making, Eric Blot in Cremona, so in mid July Sarah visited Blot at his atelier in an 18<sup>th</sup> century palazzo. Blot was satisfied that the cello was the work of Pedrazzini from circa 1920, using a model favoured by Pedrazzini's master, Gaetano Antoniazzi.

So in early September, we had a celebratory lunch around our kitchen table with the buyer and the seller of the cello, before the cello left the UK with its happy new owner.

### *Guadagnini copy*

Cellists often ask to try Robin's instruments but due to his twelve month waiting list it is rare for us to have examples of his work available for testing. Robin has recently completed a Guadagnini copy (see back page) and this instrument will stay in Ely so that it can be tried by any cellist who wishes. The plan now is to find time over the next two years to make examples of Robin's Stradivarius and Montagnana copies that can be kept for trying out in Ely. For more information about Robin's cellos: <http://www.aitchisoncellos.com/cellosra.htm>

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# EXPLORING SOUND POST CRACKS

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The humble length of spruce dowel we know as the sound post is more romantically named 'anima' (the soul) in Italian. Introduced into the instrument through an *f*-hole, it stands just behind the treble bridge foot and is held in place between the front and back plates by friction alone.

As its Italian name suggests, the sound post is one of the violin family's greatest strengths but it also happens to be one of its greatest weaknesses. The post causes the instrument to vibrate in asymmetric patterns which project sound very powerfully; in this way the sound post gives violin family instruments their exceptional loudness. The bad news, however, is that there is significant pressure where the sound post touches the internal surfaces of the front and back, so that the plates are susceptible to cracking at these points if an instrument is dropped or falls over.

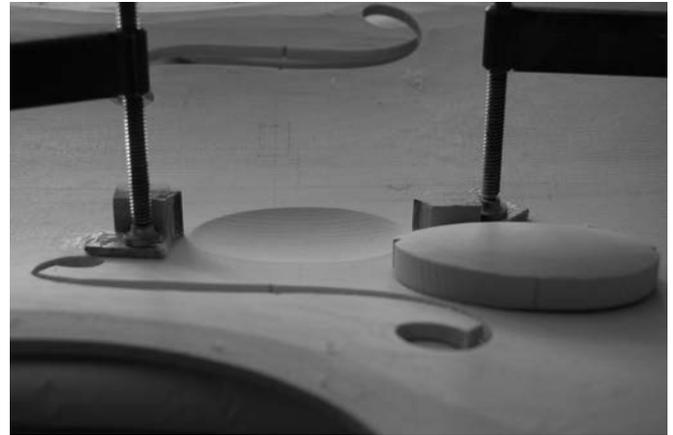
When a sound post crack occurs, it is generally not adequate to repair it like a normal crack because as soon as an instrument with a sound post crack is back in use, the forces exerted by the sound post will tend to re-open a crack if it is only held together with hide glue and internal studs. In order to overcome this problem, luthiers traditionally fit an internal patch in the vicinity of the sound post where the crack has formed. The technique involves excavating wood from the inside of the plate, removing almost the entire thickness of the plate at its deepest point at the centre of the post and fitting a patch of fresh, uncracked wood into the depression. This sounds rather radical, but it is a routine procedure and a very well-proven and tested technique, though it requires skill and experience to perform it well.

## Fitting a sound post patch

The first priority for the luthier is to close the crack as perfectly as possible and then to create a counter form which will support the instrument from the outside while the cracked wood is being excavated and also while the patch is being fitted and glued into place. Counter forms are usually made using a casting material such as Plaster of Paris – or a modern synthetic casting material – so that the counter form fits perfectly to the outside surface of the plate in the area of the crack. The cello front or back is then carefully located onto the counter form and clamped into position.

The luthier then carves out an oval hollow or depression in the plate, removing almost all the wood in the area of the crack. This is a sensitive process, requiring regular monitoring of the thickness of the remaining wood. The luthier finishes the hollow into a smooth 'female' shape to which it will be easy to fit a 'male' plug, and then

prepares a plug made from carefully selected wood whose grain is in the same orientation as the wood of the plate. This plug will form the sound post patch when it is fitted, glued into the depression and carved down to the thickness of the surrounding plate.



*A plug sits upside-down, ready to be chalk fitted into an excavated hollow in a cello front. Two clamps hold the front onto a counter form and pointed locating studs are glued at each end of the hollow. 'Nicks' are cut into each end of the plug to fit the pointed locating studs so that the plug can be lowered into position accurately.*

When the plug has reached an approximate fit, the luthier glues a set of locating studs at each end of the hollow (see photo above) which enable the plug to be lowered into the hollow in a controlled and repeatable way. The luthier can then proceed to the fine-fitting stage by applying a fine coating of chalk onto the inside of the hollow, then lowering the plug down into the hole until it touches the chalk. The luthier then starts paring away excess chalk-marked wood to increase the area of contact in the hollow and repeats the process until the plug fits the hollow perfectly.

In order to ensure a successful glue-bond between the patch and the plate, it is best to seal the pores of the wood in both the instrument and patch with a glue size. This minimises glue impregnation into the wood when the joint is finally glued, so that the hot hide glue can form a powerful bond between the plug and the plate. Once the plug is successfully glued into the depression, the luthier can carve away the excess wood until the patch is the same thickness as the surrounding plate.

If you ever find yourself in the position of having to get a sound post crack repaired, we recommend choosing your luthier as carefully as you would a surgeon if you needed a major operation. The aim is to find a very good and experienced restorer for whom sound post repairs are a routine procedure and who has an understanding of all the complex factors and potential problems involved.

## The significance of sound post cracks

An open sound post crack in the front or back of an instrument causes a major loss of structural and tonal integrity, due to the sudden reduction in strength of an area of the plate which needs to be worked hard by the sound post. Repairing a sound post crack is a more complex and expensive procedure than repairing an ordinary crack, due to the complexity of the repair process. Cracks in the front are much more common than in the back because of the linear structure of spruce, compared to more homogenous maple. Sound post cracks in the back are regarded as more serious than cracks in the front as the structural demands on a back sound post repair are more onerous than on a front repair. Sound post cracks in the back are also more time-consuming and expensive to patch than cracks in the front.

Players worry that patches will change the sound of instruments and there have been cases historically when this has happened, usually when much larger patches such as 'breast' patches are fitted, but tonal problems can occur if a sound post patch is poorly designed or the luthier is over-conservative when finishing the patch to the correct thickness.

### What is the effect of a sound post crack on the value of an instrument?

A common misconception is that a cello with a repaired sound post crack will not make a good financial investment. However, the truth is that as long as the purchase price reflects the existence of the sound post crack, this cello will be just as good an investment as an instrument without a sound post crack. The crucial issue is that the cello should be priced appropriately.

We have made a survey of our colleagues across the world, asking how they calculate the price of an instrument with a sound post crack. They all agreed that it is an important topic which is rarely discussed in public for fear of misinterpretation, on the basis that 'a little knowledge can be a dangerous thing'. However, we will try to explain this complex process, hoping to create a fair picture of how prices are evaluated in the trade and how the presence of a sound post crack affects the value of an instrument.

First, it is necessary to understand how makers and dealers value instruments. This process is potentially very complex, but at its core, the procedure is as follows:

1. Identify the instrument. The value of an instrument is based primarily on its identity (i.e. maker or school of making) and not, for example, on how good the instrument sounds.
2. Ascertain the 'normal price' for a good example of this maker's work.

3. Adjust this 'normal price' by calculating the impact of all the factors which apply to this instrument, for example the condition of the instrument, the quality of the materials used, its size – string or stop length – and which period in the maker's output it represents.

The 'normal price' of instruments is of great significance to experts because it is deduced from the existing historical price data available. The normal price therefore allows experts to base the pricing of an instrument on concrete data and gives a reliable reference point.

The normal price for a 200 year old cello (or a 300 year old violin) is, in fact, based on an instrument which has a repaired sound post crack in the front but is otherwise in good condition. Because the vast majority of 200 year old cellos have sound post cracks in the front, this is the accepted norm for cellos. We would only penalise the price of a cello with a sound post crack in the front if the crack was complex or irreversibly badly repaired. However, as it is not the norm for a newly made instrument to have a sound post crack, it is appropriate to apply a price penalty if a sound post crack exists in a contemporary cello. Conversely, if you come across a 200 year old cello or a 300 year old violin without a sound post crack, then you would expect such an instrument to have a price premium (above the 'normal price') for being in exceptionally good condition. So the first complicated truth is that, in practical terms, the price penalty for the presence of a sound post crack depends on the age of the instrument.

Cellos are much more vulnerable to damage than violins, as they are fundamentally more fragile and are often left lying on the floor. Therefore, cellos tend to have many more repairs than violins of a similar age. For this reason, the average price penalty for a sound post crack in a cello is lower than that of a violin. For a violin, the price penalty for a sound post crack in the front is 20% and in the back, 50%. For a cello, the price penalty is more like 10% for a sound post crack in the front and 40% for a sound post crack in the back.

The loss of value associated with sound post cracks is obviously quite substantial, but in our eyes a sound post crack does not make an instrument less desirable, as long as the price of the cello reflects its condition. We would certainly regard an honestly priced but otherwise healthy cello with a well repaired sound post crack as being a much more desirable prospect than a cello with a large number of cracks in the front, none of which happens to be a sound post crack. Fine cellos with sound post cracks can be excellent and affordable instruments for players who otherwise would not be able to own an instrument of such quality.

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# SELECTED CELLOS AND BOWS

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Recent sales have included cellos by Giuseppe Pedrazzini and Benjamin Banks and we have a growing list of cellists seeking fine cellos up to £150,000. Please contact us if you would like to offer an instrument for sale through our Cello Exchange. For terms and conditions, see: [www.aitchisoncellos.com/celloexchange.htm](http://www.aitchisoncellos.com/celloexchange.htm)

## KENNEDY SCHOOL CELLO c.1820

L.O.B: 29½" (740mm) String length: 26¾" (680mm)  
Price: £30,000

This attractive cello has a beautiful, expressive tone and a very quick response. It is in good playing condition and has fine orange-brown varnish.

## LONDON SCHOOL CELLO c.1820

L.O.B: 30½" (766mm) String length: 27½" (689mm)  
Price: £25,000

A handsome English cello with a deep, complex tone and excellent projection. The attractive orange-brown varnish is of very high quality.

## THOMAS SMITH CELLO 1762 (Baroque)

L.O.B: 29" (737mm) String length: 26⅝" (677mm)  
Price: £25,000

This fine 18<sup>th</sup> century baroque cello has a clear, open tone with considerable depth and beauty and is in good condition. Labelled:

'Made by Thos Smith at the Harp and Hautboy in Pickadilly London 1762'

## GEORGES ADOLPHE CHANOT 1895

L.O.B: 29¾" (755mm) String length: 27½" (700mm)  
Price: £22,000

A handsome Guarneri model cello by the famous Manchester maker in very good condition with fine orange brown varnish. The tone is rich, powerful and colourful. Labelled internally and inscribed at the endpin.

## ROBIN AITCHISON CELLO 2012

L.O.B: 29" (737mm) String length: 26¾" (682mm)  
Available for trial only  
Price for new commissions: £20,000

A close copy of a Milan period cello by GB Guadagnini circa 1755 with an exceptionally quick response and complex, colourful tone. Antiqued transparent brown varnish over a golden ground.

## MICHAEL KEARNS CELLO 1998

L.O.B: 29½" (750mm) String length: 27½" (698mm)  
Price: £16,000

A responsive, attractive cello by a respected maker in very good condition. The tone is open and powerful and the varnish is orange-brown over a golden ground.

## HUNGARIAN CELLO c.1910

L.O.B: 29½" (751mm) String length: 27¼" (693mm)  
Price: £10,000

A handsome Hungarian cello in very good condition with a warm tone and generous response.

## MITTENWALD CELLO c.1890

L.O.B: 29⅞" (760mm) String length: 27¼" (698mm)  
Price: £tbc

An excellent example of the Mittenwald School in very good condition with a strong, colourful tone. This cello has been repaired, re-graduated and a new bass bar fitted in our workshop.

## Selected Cello Bows

Charles Espey	80.7	S	£4,750
William Salchow	81.9	S	£4,590
William Salchow	76.9	S	£4,590
Paul Sadka	81.8	S	£4,000
Steve Salchow	82.8	S	£3,820
Carl Nürnberger	77.4	S	£3,500
Tino Lucke	76.5	S	£3,500
Christian Wanka	82.8	G	£3,000
John Aniano	81.0	S	£2,900
Bernd Etzler	81.4	S	£2,750
Bernd Etzler	82.3	S	£2,750
Robert Pierce	80.6	S	£2,730
Robert Pierce	81.2	S	£2,730
Howard Green	81.9	G	£2,500
Klaus Grünke	82.0	S	£2,400
A R Bultitude	88.2	S	£2,000
Richard Wilson	82.2	S	£2,000
German bow c.1920	78.0	S	£2,000
Thomas Grünke	80.7	S	£1,950
Klaus Grünke	79.4	S	£1,950
David Tempest	80.2	S	£1,950
J S Rameau	76.7	S	£1,500
German c.1930	85.2	S	£1,250
German c.1930	76.7	S	£1,125
Atelier Demarche	80.8	S	£750

Weight = in grammes  
S = Silver; G = Gold