

# S THE 11 Scroll

The Newsletter for the  
Cox Violin Community  
FALL 2010

[www.coxviolins.com](http://www.coxviolins.com)

## Dear Friends,

In dedicating this edition of the Scroll to my late friend and mentor, Marylou Speaker Churchill, I want to recognize and celebrate the profound influence that she had on my career. There are hundreds of individuals, not all musicians, who can say the same. Her reach as a teacher, musician and friend was vast and through those hundreds of people her teachings and her spirit will live on.

Marylou's own words can teach all of us, so I offer them here. These are excerpted from remarks made in September 1994 to young professional musicians just starting their careers.

*"The greatest concern of the young musician is the belief in stage-fright or nerves. Assuming proper preparation and a good attitude (I have nothing to lose, I don't have the job so I can't lose it), the manifestation of a loss of control is simply fear; fear of not doing as well as you can. There is a law of this universe which is so simple and so powerful and it literally wipes this fear out of your being, and it is this... "perfect love casts out fear." If you are actively engaged in loving your instrument, loving the music, loving the audience, loving the committee, loving your enemies, then there is simply no room for fear of any kind, and you will find yourself playing better than you expected. To love is to live, and breathe, and sing, and play. Love then.*

*Is playing orchestra a joy or a job? It's wise to make it a joyful job, but remember that no job really employs you completely. Working for money is never the real reason for doing any job. You must love what you do, and then you will find happiness and joy in your work. In actuality you are always being employed to*

*express all the best qualities you are capable of, such as intelligence, wisdom, beauty, balance, grace, sensitivity, awareness, love...this is full-time employment, and it doesn't take a full-time paying job to put these qualities into practice. Getting the job merely continues the expression of these qualities, which should ever continue to grow and develop. The job is really an acknowledgement of those qualities already expressed.*

*Make excellence, beauty, and truth your goals, and you will rise to that level. Keep growing. It has a wonderful effect around you. Establish a disciplined routine; very little progress comes in*



*spurts. Consistent, daily work brings strength and freedom. Love your instrument; love your work on that instrument if you intend to make it your life-work. There is no greater joy than to master your instrument, play it beautifully, and bring everyone such deep pleasure. It uplifts and inspires, yourself included."*

Thank you, Marylou.

*Danah Cole*



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# From the Bench

## 300th Anniversary Strads

What is so special about a Strad and why do players find them so satisfying? There are several angles to this: What do we know about the violin? What can we measure and say about the sound it produces? And what does the player feel and experience? I've been looking at all these questions. Other, more scientific, minds are working on the first two questions and it is an honor to be able to work with them. The Strad 3-D project is a stunning demonstration of what can be measured with current technology. Find out more at the website, [www.strad3d.org](http://www.strad3d.org).

Just as a Strad is more than the sum of its parts and it is the harmony of the whole that makes it work so well, understanding the violin, its sound, and the way it works for the player must be studied together.

I am using the 300th anniversary year of several of the great Strad instruments as one focus for this study, to give insight into how Strad's work evolved and how he was thinking and working at approximately my time of life.

This past year I had the opportunity to study the "ex-Kempner" 1709 Strad owned by Marlboro Music and played by Soovin Kim.

The study included measuring and photographing the violin, measuring its acoustic properties, recording its played sound, and interviewing Soovin about how it works for him. All of this informed the making of a copy: the way I synthesize and test what I think I know.

I also made a copy of the "Viotti" Strad from 1709. A copy of the "Vieuxtemps" from 1710 is in the works. Any nominations for 1711?

## The Gasparo da Salò Style

In 2008 I worked on a model new to me, based on the instruments of Gasparo da Salò (1540-1609), known to some as the inventor of the violin. I did not copy any specific instrument, as few of his violins remain; instead I used what I know of his work to inform me. The violin is big (359 mm) and fat (170 mm upper bout, 208 mm lower bout), dark and resonant. Sue Engle, the Vermont violinist who purchased the first instrument on this pattern, writes, "What an amazing instrument! I am fascinated every day with its powerful, expressive, dark tone. I never tire of exploring the many colors this violin unlocks."

## On Violas

I've recently had success making violas with backs made of willow and birch rather than the usual maple. This has inspired trials of other less common woods. Local butternut and cherry backed violas are in the works and I am considering trying other woods in future violas.

Using these lighter woods gives the violas an easier response and a dark, warm tone color, expanding the range and variety of violas I am able to offer.



# The Protocol: Exploring The M

In the fall of 2009, we set about documenting the production processes, testing and data recording methods Doug uses in his work. We were fortunate during that time to have Isaac Avenia-Tapper in the studio as a studio assistant/intern. He was charged with the task of observing and describing Doug's making process from start to finish, at the same time learning, documenting and helping to refine the measuring and testing procedures.

Our goals included creating a record of the production process, identifying which data are useful, and establishing and documenting accurate and efficient ways of gathering that data. We hope this will inspire other makers to measure and test some of the same things in their work to build a larger body of data for all violinmakers to use.



Measuring the volume of a viola.

With nearly 700 instruments already made, and more on the bench, Cox instruments are a valuable testing ground for innovative measuring techniques and analysis. By testing each instrument during and after the making process, and testing older instruments as they come back into the shop for checkups and repair, we are developing a large and useful database.

In addition to conventional measurements, some of the finest old instruments are being examined and tested in new ways. We can use new technology to compare modern instruments to these old masters, giving present-day makers more insight into what makes a violin great.

## Some of the New Methods

**Wood Density:** Wood densities of the plates are determined by measuring the weight of glass bead displaced by each plate in a custom-built container. This can be done at any point in the plate-carving process.

**Air Volume: What's in the Box?** The air volume of instruments that differ in size, length, rib height, and arching is difficult to calculate but affects differences in sound, tone color, and loudness.

Before attaching the top, the volume of the body is measured using fine uniform glass bead the consistency of sand, each section carefully filled and leveled, and the glass bead weighed to calculate liters of volume.

**Flexibility Plot:** The stiffness of a plate is the product of the material and its density, the shape and height of the arching, and the thickness of graduation. Measuring the stiffness in a controlled and comparative way gives a base-line measure of stiffness and compliance of the plate.

Collaborating with David Meyer, a mechanical engineer and violinmaker from Jeffersonville, Vermont, we developed the *Plate Stiffness Assessment Tool*, which applies a controlled point-load to



The Plate Stiffness Assessment Tool

specific points on the top or back plate and measures the resulting deflection in the plate. This gives a repeatable, comparable measure of the stiffness and compliance of each plate.

**Spectral Analysis:** The taking of impact hammer readings generates a picture of the audio output of an individual instrument: an audio fingerprint. The bridge is tapped with a tiny impulse, and the resulting vibrations are recorded and charted by computer. Readings are taken at several intervals during the making process and at various points on the instrument.

Using these readings, we can measure an instrument's energy output in certain audio bands, at different frequencies, and at different stages of production. The readings can change slightly depending on humidity, the age of the instrument, and other variables, but each instrument has a distinctive and recognizable pattern that can be compared to other instruments and to itself over time.



The Acoustics Rig

Physicists and other scientists have been studying the violin for many years. New technologies now available allow deeper understanding of this elegantly designed instrument. Laser measuring systems, medical imaging equipment, and high power computing are increasing our knowledge in exciting ways (see [www.strad3d.org](http://www.strad3d.org)). Adding to and applying this knowledge at the bench is a wonderful challenge.

*"When trying out some of Mr. Cox's violins I felt I wasn't educated enough to choose the right one. But when I played his Guadagnini copy, it sounded like I was playing an old instrument. It was a really good feeling. Having an instrument like this gives me confidence technically and musically, and inspires me."*

As a young child in Havana, Sandro Leal-Santiesteban accompanied his mother, a pianist, to rehearsals and lessons. He heard the Franck Sonata for Violin and Piano at one such rehearsal and fell in love with the violin.

When Benjamin Zander toured Cuba with the New England Conservatory Youth Philharmonic in 1999, Sandro and his school orchestra had a chance to perform with them. Seeing the level of commitment in the American kids helped Sandro to realize he needed to leave Cuba and study in the US. It was a challenge, especially since relations between the United States and Cuba were so poor, but he was granted a visa in 2001 and came to Boston to study with Marylou Churchill.

Before coming to the States, Sandro played on a poor instrument with no projection, and a bow held together with scotch tape. It was through the generosity of the Douglas Cox Scholarship program, Marylou Churchill, and a family friend that Sandro was able to purchase #428, a Guadagnini bench copy. With that violin he completed his bachelor's degree at Eastman, was sub-listed at the New World Symphony, was chosen as a semi-finalist at the Sphinx Competition, and received his master's degree from Carnegie Mellon University's School of Fine Arts. "I don't think I would have succeeded at these endeavors without the Guad."

At the urging of his teacher, Cyrus Forough, and with the help of Paul Becker at Carl Becker and Son in Chicago, Sandro has recently traded up to a newer Cox violin, #503, a Strad "Rosenblith" model. It was on this instrument that he won first prize in the Concerto Competition at Carnegie Mellon, where he played the Ranjbaran concerto, a contemporary piece requiring substantial tone production.

Sandro writes, "Marylou Churchill gave me a different perspective to look through music. Every time I had a lesson with her she would say to me, "You have to love it!" and I did. Marylou was a person with so much love to offer for everyone. Ever since I met this extraordinary human being it was like discovering the violin and music all over again. My career would not have been the same without her."



### Reflections on working with Doug

*Isaac Avenia-Tapper grew up in nearby Cambridgeport, Vermont, and is now studying Jazz Voice at the Hartt School in West Hartford, CT. Isaac came to Cox Violins as an intern from November '09 until March '10. He writes:*

When I began my internship with Doug I knew very little about how violins are made. In learning about the violin making process, I've discovered that our disciplines have more in common than I would have guessed. Viewing the making process from the vantage point of a jazz musician has helped me better appreciate and understand Doug's work. Here are a few comparisons I've been pondering.

The work of a violinmaker, like the work of a jazz musician, is rooted in repetition. Just as a musician works from a set of standards, a violinmaker builds from a set of forms based on the work of past masters. The artistry lies in how the pre-existing form is rendered. This, to me, is a key concept in understanding Doug's work. From week to week as I became more familiar with Doug's instruments and making process, I began to pick up on more of the subtleties in both their appearance and sound. Like most art, I find that the better I understand it, the more beautiful it becomes. There is a richness and complexity in Doug's work that speaks to his artistry and understanding of the form and history of these instruments.

Doug's mastery of his tools has often reminded me of a musician's command of their instrument. His skill with each tool and his feel for each piece of wood he works with is fascinating. It has been a pleasure and privilege to watch him perform. Watching Doug work has helped me understand his art: to me, the beauty of his instruments is as much in the crafting as in the finished product.

There's an important difference between Doug's art and that of a musician that helps illustrate his work. A musician's art is meant for others to enjoy but Doug's art is meant to facilitate the creation of others' art. This fits Doug perfectly. He's an invested supporter of the local arts scene and believes strongly in the role that the arts play in enriching our communities. It makes sense that Doug's work enables more art.

As I prepare to continue my study of music, I've been thinking about what I've learned. One important piece has been the experience of working closely with another artist and coming to a better understanding and appreciation of his work. Seeing Doug's process and his dedication to making fine instruments has inspired me to hold up a lens to my art. Looking at violin making as a jazz musician has helped me appreciate Doug's art; but in the end, working with Doug has strengthened my conceptual understanding of my own art.





Photo ©Kristyn Parker

## Instrument Showings

### BOSTON, 2010-2011

I will be bringing instruments to monthly Saturday office hours in Boston, starting in September.

|                 |             |
|-----------------|-------------|
| September 18    | October 16  |
| November 13     | December 11 |
| January 15, '11 | February 12 |
| March 12        | April 16    |
| May 14          |             |

### OTHER OPPORTUNITIES

Visitors are welcome at the studio. Call to be sure I will be available when you want to visit. Directions are on my website.

### ON THE WEB

You will find links to artists and organizations mentioned here on my website. I have begun adding profiles of the interesting and diverse people who play my instruments. Click on the "Spotlight" link to see them. Let me know if you'd like to be included.

I have begun an email newsletter, published on no definite schedule. You can opt in via my website or by sending an email to [info@coxviolins.com](mailto:info@coxviolins.com).

*The Scroll's purpose is to provide information and enjoyment to people interested in fine new instruments.*

*I welcome your inquiries and hope you'll tell me how I can be useful to you. There are a limited number of scholarships for exceptional students who cannot procure fine instruments in other ways. If you'd like more information about scholarships, let me know.*

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## Praise for Doug's Instruments

"I just wanted to tell you how wonderful the Ginn copy is sounding, with a depth of tone and rich color that even has my chamber music buddies singing its praises! It pleases me that this is a 300th anniversary violin: 1691 - 1991."

**Rev. Charles Kessler, Violin**

"Thank you for such beautiful work and also for this extraordinary violin, which is so fine and fun to play that it is opening all kinds of possibilities in early music to me. I love its inner life and warmth, its exuberance!"

**Maria Benotti, Baroque & Classical Violin**

"I am thrilled by all three of these violins. I chose this instrument over the other two because of the interesting colors and the powerful tone. All three Cox violins I tried sound better than most other violins I tried in this price range. They are visually beautiful as well. Thanks again!"

**Andrew Giordano, Violin**

"The first scale I played on the first viola I picked up was absolute magic! And I was as much impressed by Doug's friendliness and dedication to his craft as I was by the quality of his instruments."

**Ken Allen, Viola**

"I knew as soon as I played on your violin that it really matched the sound I was looking for; it felt like my own voice right away."

**Jamecyn Morey, Violin**

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