Violin Octet

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The New Violin Family Association, Inc.

Hutchins Consort Brings Down the House at 2006 GAL Convention

The Hutchins Consort at Lagerquist Hall. L-R: Gascia Ouzounian, Igor Tchetchko, Ethan Busteed, Carolyn Aquallo, Omar Firestone, Emily Dufour, Frederick Charlton, and Joe McNalley.

What was Tim Olsen, the founder of an organization of 3500 guitar makers, thinking when he invited a group of eight violinists to perform at his 2006 convention? Admittedly, this was not your ordinary group of violinists, and, admittedly, they were not playing on your ordinary group of violins! "What was I thinking?" muses Olsen with a smile. "I was thinking that it was a great opportunity!"

Olsen admits that his organization, the Guild of American Luthiers, is comprised mainly of plucked instrument makers, and that he has long wanted to attain a better balance. During the months leading up to Octet 2005, the first international convention of the New Violin Family Association, Olsen worked closely with NVFA newsletter editor Robert Spear on advertising and publicity, and a friendship sprang up between the two men. Olsen had the idea to feature Spear's violin octet at his 2006 convention, but the Albert Consort was unable to accept the invitation. Spear suggested the Hutchins Consort instead. Olsen contacted Joe McNalley and was delighted to learn that the consort was available, especially because it performed on eight original instruments by Hutchins and her colleagues.

"We have followed Carleen's work from the beginning because there are fiddle makers among us, many of whom have been Catgut Acoustical Society members," Olsen continues. "Carleen spoke at our 1979 and 1992 conventions. We glimpsed an octet at the National Music Museum when our convention was there in 1992, but there were no competent players to demonstrate them. So the octet has remained rather legendary to us. Here was our chance to hear them played well."

In the issue of the GAL quarterly magazine, *American Lutherie*, published just before the convention, Olsen featured an extensive interview of Carleen Hutchins conducted by Alan Carruth. A sidebar tracing the histories of the Catgut Acoustical Society and the New Violin Family Association, written by Robert Spear, was also published. A two-page centerfold of the full octet completed coverage in the magazine, making it a memorable edition.

"The concert was a payoff for decades of references to these ideas in *American Lutherie* magazine," says Olsen. "And aside from being a most interesting

project in terms of physics and music, an octet is a woodworking tour-de-force, an impressive achievement by any measure."

If there were any remaining concerns about the mixture of the octet violin world with the guitar world, they were quickly dispelled by McNalley's low-key and light-hearted approach and the informal nature of the performance. In a nod to his audience, McNalley used a Fender electric guitar, played by his nephew, the rising young jazz guitarist, Tom McNalley, to play the continuo part in a piece by Antonio Vivaldi, explaining that it was a continuation of past practices when such a part might have been played by a lute. McNalley then mentioned that his other bass, which he uses in his traditional orchestra work, was several hundred years old, and that the conventional instruments used by the other players in his consort in the course of their normal work were also quite old. His witty observation that the oldest instrument on the stage at that moment happened to be the Fender electric guitar brought a roar of approval from his audience.

The crowd in Lagerquist Recital Hall was friendly and receptive, and the consort received a standing ovation at the end of their performance. The group returned to play an encore, "Ozark Swamp Gas," by the consort's bass player and composer-in-residence, Frederick Charlton. Olsen said, "I think that the standing ovation meant a lot of things: respect for Carleen and the NVFA, honoring the sheer lutherie achievement of one person building a complete octet (even aside from the problem of designing the new family), the skill and intensity of the musicians, the success of the arrangements in demonstrating the unique voice of the octet, and the success of the octet in extending the voice of the violin across the entire musical range."

Tim Olsen, founder, Guild of American Luthiers.

McNalley told us, "The convention was terrific fun, and we had a very good tour overall. The GAL was great group of people to play for." Apparently, the feeling was mutual. Don Bradley, who was in the audience for the performance, said afterward that any time a group of violinists gets a standing ovation from over 300 guitar makers, it's a real accomplishment.

Todd Rose, a guitar maker from Ithaca, New York, noted that the sound of the octet was unlike anything he'd ever heard before, so much so that he made it a reference for other things he heard at the convention. He noted that the unified nature of the voices between the octet instruments was only half of the story; the other half was the unified nature of the voice of each individual instrument. Rose addressed a common misconception about the Octet, usually put forth by individuals who have not heard one, that an ensemble whose voices blended so perfectly would have a bland or drably uniform quality. "I did not find this to be the case with the New Violin Octet at all," Rose says. "I'd say it emerged as "authoritative. It was extremely powerful, to say the least."

More on the Consort.

Consort founder and contrabassist Joe McNalley recently brought us up to date on consort activities following the GAL performance. As many of our regular readers know, the group acquired a second octet from Carleen Hutchins in the fall of 2005. McNalley says that one of the big reasons for acquiring another set was so he could develop more players.

"We've got some new talent now, including Nathan Schmidt, a Juilliard and Eastman trained violinist and composer, who is working with the mezzo. Chris Otto, also from Eastman, is a fine new treble player and composer. Emily Dufour is playing the cello-like instruments. Mark Dresser, who old timers may remember played the big bass for the ASA conference in San Diego in 1982 or 1983, recently joined our ranks, giving us an impressive one-two-three bass section. Mark and I are planning a duo record for the bass instruments. We plan to add all the new players to our website shortly.

"The consort was in the recording studio in August. We recorded concertos by Corelli, Torelli and Zavateri. We also recorded The Sweelinck *Hodie*, Grieg's *Holberg Suite*, Charlton's arrangement of *Summertime* and his *Ozark Swamp Gas*, which we played as our GAL encore piece. Piazolla's *Libertango* rounded off the effort. We started mixdown the second week of September.

"We have a fundraiser November 12 that will feature Chris Otto playing the *Goldfinch* concerto, and our season opens Nov 17 at the Neuorsciences Institute, with guest soloist Allan Vogel playing the Vaughan Williams Oboe Concerto. There will be another performance of the same program Nov 19 at the Irvine Barclay. We are vigorously working on new press materials, demo discs, and brochures."

♫

Basic Violin-Making Acoustics

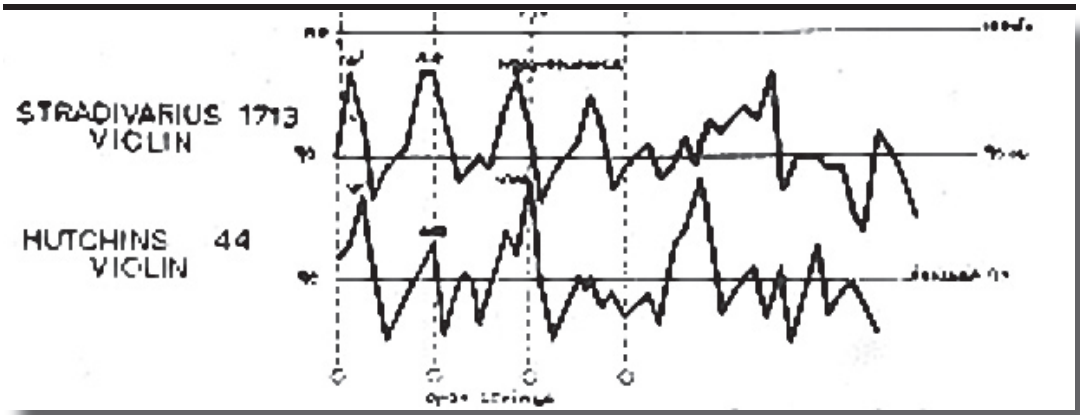
Carleen Hutchins begins this series of articles with an historical retrospective of the most fundamental concepts of violin acoustics for the beginning violin maker.

Main Air and Main Wood Modes

In 1957 the composer, Henry Brant, rang my doorbell and said he was looking for a violin maker willing to try an idea that he had. He wanted me to develop and construct seven violin family instruments that could carry the sound and playing qualities of the violin, its full range of sound from *ppp* to *fff*, its quality, brilliance, and flexible playing qualities, in all ranges. Since I had been working with Dr. Frederick Saunders of Harvard in violin acoustics for over 10 years, I was immediately interested in Brant's proposal. Within 10 minutes I had agreed to try to do what Brandt wanted, but it took me nearly 10 years to do it.

Two Main Resonances.
I talked the concept over with John C. Schelleng and Saunders, who were not very enthusiastic about the idea. For a start, we agreed that a study of some of the loudness tests Saunders had made of famous violins and violas might give us some clues. These tests showed that there were two powerful resonances (sounds) in the violin. The lower one, which we called the "main air resonance (A0)," was usually on or close to the open D string, and the other, which we called the "main body resonance (B1)," was very close to the open A string. The important fact new violin makers must be aware of is that the lower resonance is caused by air vibrating within the body, while the other is caused by powerful movements in the wood. In conventional violas, both these resonances are placed considerably higher than the tuning of the two unstopped middle strings.

We eventually found that Jascha Heifetz' beautiful Stradivarius violin had these two strong resonances directly on the two unstopped middle strings, so that when he tuned his violin to the orchestra before a concert, the sounds from the two open middle strings filled the whole hall. With this encouragement, we decided to see what would result if we developed instruments in other sizes that had their main air and main wood resonances near to their open middle strings.



The graphic shows loudness curves for two violins. The dotted vertical lines are the 4 open strings, lowest on left. Note the excellent reinforcement of the two middle strings of the Strad, with A0 peak just below the open D and B1 peak just below the open A string. Note also the resonant peak close to the E string, and the left peak nearly on the G string, labeled W1 (wood prime), which is an octave below the main wood resonance. The Hutchins violin #44 has the A0 and B1 peaks exactly on the open strings. The spacing of the resonant intervals at approximately musical fifths may also be important.

The First Alto.
We found a small child-size cello about 21" (533.4 mm) in body

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What's a Mode??

For our purposes, we make our definition not as though there were a number of physicists standing behind us, but rather as if there were a number of students standing in front of us:

A mode is the normal state or condition of an object subjected to a specific condition or set of conditions.

Your team is losing late in the game, and the sportscaster announces that the entire team is in "catch-up mode." That describes a specific situation that influences how the entire team in all its parts will normally respond, and it's pretty easy to understand. Now say your team is ahead and is trying to prevent the other team from scoring by going into "delay mode." Same team, same game, but responding differently to a different condition.

When a violin responds by producing a large resonance in the body air cavity when the specific condition of bowing the open D string is taking place, we call that its "air mode." This mode is the normal condition for a violin under that particular stimulus, which is why it is also called a "normal" mode. Under different conditions or stimuli, the violin can display many different modes, either in its assembled form or in its individual parts.

Selling the Belgian Bassetto

Joris Wouters tells us in his own words that the road to building the first Belgian Octet has some sharp turns, but that the view around the bend can be very appealing.

Silvio Dalla Torre (bass professor in Rostock Germany) contacted me early in 2005 after a long search for an instrument that could be tuned in fifths. Eventually he got to the NVFA site and found out that there was a weirdo in Belgium making these things. In fact, as far as he knew, I was the only one in all of Europe. Actually, it was thanks to my link on the NVFA site that he got in contact with me. So at first there were mails going back and forth, you know how that goes, and in the end he bought the instrument. Well, no; maybe that's a bit too short.

Silvio, however, convinced me to start on the bassetto. He was hoping to record his new CD with the instrument by the end of November! Now tell me, how much more persuasion does a luthier need? Eternal fame and glory with music on a CD played on your instrument, bass players lining up in front of your door, you name it. Since then I have learned that eternity is too long for me and bass players still can't seem to find Westerlo.

Anyhow, by the time I agreed it was early March, and I had no wood, no templates, no nothing. A quick planning warned me that I needed about 15 weeks to do the varnishing, at least a month hardening after that and yet another month to do the finishing, setup, and tuning. And preferably a few weeks extra for the "you never know" things.

Inside Wouters' bassetto top, the well-defined nodal pattern of mode 5 clearly suggests why this small bass sounds so good.

My original plan was and still is to make an entire octet. I was at the time working my way down; I had the alto, mezzo and baritone finished, while the soprano and treble were somewhere between almost done and being ready to varnish. The next step for me was the tenor and then move on to the big boys.

This meant that the instrument had to be finished in the white by the end of June! If I calculated further, maybe I should say if I guessed, that left me with about four months filled with seven days a week of 8 hours work. A walk in the park. My grandparents did the same thing except on Sundays (let's forget for a minute they worked 14 hours a day for a lifetime).

First concern was, of course, the wood; no wood no bassetto. So off to Germany I went, then Austria, where I found an awful lot of bass wood, unfortunately, all freshly cut. A back, however, I found pretty quick, 14 years old and ready to go. Why nobody else ever bought it only God knows, but I loved it the moment I laid my eyes on it. The top was more fun. One sawmill that assured me they had what I needed had cut up their bass wood for guitars only a few days before I got there (probably they also had ideas about immortal fame and that kind of thing).

Eventually, I got home with a promising back and a top I thought might work. Carefully examining and outlining the top told me that it might not work: there was a huge knot in it that I just could work my way around. Or maybe not. To make a long story short: after traveling thousands of kilometers, I finally found a nice top, 13 years old, in Belgium, only 40 km from my home. How lucky can one be?

By then it was time to go to work, 8 hours each day, seven days a week. Just before the varnishing Silvio came over to see how things were going. He found the fingerboard too low to reach over the instrument in higher positions. So I placed a wedge under the fingerboard, raising it 6.5 mm. One week behind schedule (not too bad now that I think of it) I could start varnishing.

Sometime in the middle of October, Silvio came over again to pick up the instrument. After two days of intensive testing and making small changes, he left, his car stuffed with two basses (he brought his along to compare), leaving my shop and emotions with a huge gap. Two weeks later he sent me the following mail:

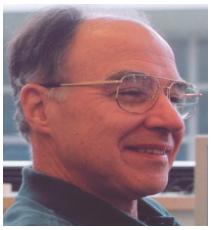
I have been testing the bassetto a few days with my pianist. The bassetto has proven itself in every situation. I also tried it in a concert hall: equal sound in all positions from the lowest to the highest note, it has no trouble in talking back to the grand piano. The timbre is silver, warm, pure, rich on overtones and bright. I have never played a better bass.

After reading this mail, I treated myself to a nice Glenlivet. ♫

Professor Silvio Dalla Torre with his New Violin Family small bass violin (called a "bassetto" in Europe).

Scaling Beyond John Schelleng

George Bissinger discusses what John Schelleng might have done differently with his violin scaling equations had he known then what we know now, and he brings us up to date on new findings for influencing violin parameters.

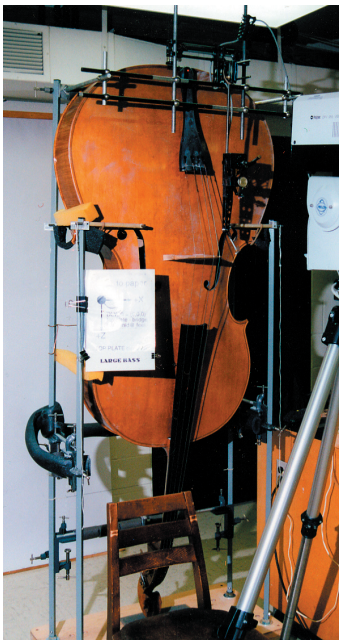


In 1963, John Schelleng published "The Violin as a Circuit," one of the foundation papers in violin acoustics. Its importance for bowed string musical acoustics was profound since it was the first application of physics to scale corpus resonances of any string instrument (in this case the violin) in relation to string pitches.

Defining Principals.
What were the defining principles of Schelleng's octet scaling? They were just similarity of materials, similarity of shape, and frequency placement of only two major low-lying violin resonances. The "main air" resonance (herein labeled A0, which refers to the volume of air contained in the violin body) should fall at 1.5 times the lowest string pitch (under the open D string for the violin), and the "main wood" (now the 1st corpus bending mode complex, B1) at 2.25 times the lowest string pitch (under the open A string). Readers should note that these frequency targets were nominal values gleaned from violins with widely varying A0 and B1 frequencies. In larger or smaller instruments the pitches of the two middle strings become the A0 and B1 frequencies (except for the very largest). Schelleng thus boiled the violin's radiation down to two basic mechanisms embodied in just two resonances(!): 1) *surface motion radiation* for B1 and all higher corpus modes and 2) *port* (f-hole) *radiation* for A0, the only cavity mode he thought important.

Reasons for Choices.
Why not just do "pure" scaling where size varies inversely with the desired pitch of the lowest string? Consider a 7- inch treble corpus or a 6-plus ft. large bass corpus. Do these seem playable? Ergonomics rules, so playability (and transportability) reigns, although practical matters such as wood, strings, etc., always intrude. Violin octet design requires real physical scaling laws to properly place these two resonances relative to open string pitches, irrespective of instrument size or pitch range, while still maintaining the essential playability of each instrument. Schelleng, however, was up to the challenge. He was able to draw on a detailed knowledge of a century and a half of violin research from Savart to Saunders to use the classic (but imperfect and incomplete) Rayleigh relationship for A0. To this he added flat plate equations for the arched plates. This may seem amazing, but these were the only available equations! And finally, he used an empirical factor of 1.5 times the tap tone frequency (average top and back) to find the approximate B1 frequency. In retrospect it is astonishing that matters worked out so well.

What Schelleng Didn't Know.
The VIOCADEAS Project – acronym from **VIO**lin **C**omputer **A**ided **D**esign, **E**ngineering **A**nalysis **S**ystem (see the *Catgut Acoustical Society Journal* for various reports),- funded by the National Science Foundation in 1998 for 4 years, allowed me to measure both the vibration and radiation from the violin, using a scanning laser and rotating microphone array. A complete violin octet was scanned as part of this project. Although violins could all be measured in an anechoic chamber, the size of the large instruments required measurements out in the laboratory as well as room-averaged acoustic measurements for all.



The octet contrabass was almost too big to measure in the ECU acoustics lab, and almost too big to fit in the holding apparatus!

As a result of all this experimentation up to 2006 we now know that Schelleng's two direct radiation mechanisms are accompanied by two additional indirect ones: 1) A1 (first along-length cavity mode) where the air sloshing back and forth between the top and bottom end blocks induces top and back plate surface motion and radiation, and 2) corpus-mode-driven volume change radiation through the f-holes for B1 and higher corpus modes. Although unknown in Schelleng's day, these two indirect mechanisms can actually dominate for specific modes. For example, A1 turns out to be the dominant radiator for the large bass in the formerly "main wood" region, while B1 modes for a violin radiate nominally half their acoustic energy through the f-holes. While these results were both for one example instrument, the mechanisms are so generic that it would be presumptuous to believe that they were unique to each instrument. Thus the violin has four different ways to radiate sound, not the two that Schelleng assumed.

The (W)Hole Story.
In 1990, the only major advance in our understanding of A0 since Rayleigh published his equation in 1877 came when Edgar Shaw published a 2-degree-of-freedom rigid-cavity network model. Shaw's model also included A1 and incorporated the cavity's geometric properties, something Schelleng did not require for the Rayleigh equation. An unexpected aspect of the Shaw model came to light in an experiment I did with an aluminum violin-shaped cavity I called *La Empierre* ("the metalled one," after Carleen's label for the swiss-cheese violin, *Le Gruyere*). I poured varying amounts of water in through

the f-holes and measured A0's frequency with *La Empierre* in horizontal and vertical orientations to redistribute the water. A1 had a different value for each vertical or horizontal orientation, and A0 changed frequencies, too, even though the volume never changed!

In the Shaw model, changing A1 changes A0. This means that if you change the length of the instrument, A0's frequency has to change, even if the volume remains the same (rib height change), thus the discovery that A0 couples with A1. Where did this coupling occur? A0 air moves in and out of the f-holes, interacting with A1 air sloshing back and forth in the C-bout region. From such little acorns do big trees grow. A0's volume dependence dropped from one over the square root of the volume (Rayleigh equation) to one over the fourth root! Putting this into numbers, decreasing the volume by a factor of two (say by dropping the rib height by a factor of about two) would lead to a 41% increase in A0 frequency using the Rayleigh equation, whereas the Shaw model would predict only a 19% increase. The reasons Carleen Hutchins' encountered difficulties raising A0 in the large instruments by decreasing rib heights now become apparent from the physics of A0-A1 coupling.

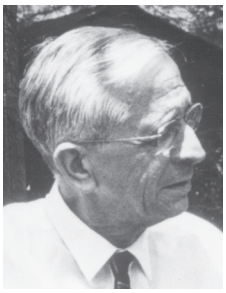
Floppy Walls.
Where did corpus wall flexing enter into the rigid cavity Shaw model? It didn't. No good physics exists for this important effect. To shoehorn wall flexing into the Shaw model, I argued that flexible walls decrease cavity stiffness (pressure) by increasing the effective volume. (Think of a rigid cylinder with compressed gas in it, then allow the walls to flex; as volume expands the pressure drops.) I then added a semi-empirical wall flex (compliance) correction that had surprisingly significant effects. As a result, the Shaw model with this compliance correction can now compute A0 and A1 within ±10% over the entire set of octet instruments, a range of ~4.5:1 in length, ~10:1 in f-hole area, ~3:1 in top plate thickness, and ~128:1 in volume.

There is an important simplification here due to Schelleng's assumption of similarity of shape– if the length changes all other dimensions scale proportionately. As always in the violin such assumptions are altered by various practical and ergonomic considerations, seen for example in the f-holes for the treble, as well as changes in upper/lower bout width ratios, rib heights, and archings from small to large instruments.

Synergy.
Why does A1 fall so low compared to what is predicted for the body length of the largest octet instruments, especially since their length was shortened considerably below pure scaling for ergonomic reasons? A1 should have fallen at ~3.75 times the lowest string pitch, but it was observed at ~2.25 times. The most plausible explanation is that wall flexing causes A1 to drop so that it falls right where B1 was scaled to fall! As an analogy, think of how A0 drops in frequency when the sound post is removed. And since A1 radiates so well for the largest bass, it actually takes over the role of dominant radiator in the "main wood" region. Quite a role reversal for a mode that Schelleng did not even consider in his scaling!

The Test of Time.
We now have more detailed experimental knowledge for the violin than Schelleng did. We know violin cavity mode shapes in detail, tap tones have been complemented with free-plate mode shapes, modal/acoustical analysis on assembled instruments has led to detailed understanding of assembled violin mode shapes, radiation efficiency mode-by-mode, effective critical frequencies, fraction of vibrational energy radiated, true material damping magnitude and trend information for quality-rated violins. Add to this a compliance-corrected Shaw model, and the necessary physics is available for makers to modify an instrument (but not the materials or basic geometry!) while placing A0, A1 and the two B1 resonances close to where desired. Thus the normal mode properties that make the violin such an acoustic success can be imparted to other bowed string instruments.

Yet Schelleng's original flat-plate scaling procedure has stood the test of time. Schelleng really went where no one had gone before, and the violin octet set constructed by Carleen Hutchins in a wonderfully close collaboration with him remains a lasting tribute to his remarkable understanding of the violin and what makes it work.



John C. Schelleng

Most of us know that John Schelleng (1892-1980) was an electrical engineer with Bell Labs in radio wave research. What is not as well-known is that he was a fine cellist, and, according to Arthur Benade, "a pretty good fiddle player." These traits led him to pick up the work of Frederick Saunders after he (Schelleng) retired in 1967. In his second career in violin acoustics, he tackled many difficult problems, including analyzing the wolf note in cellos, and ultimately it fell to him to work out the scaling equations for the New Violin Family. It was this project in collaboration with Carleen Hutchins and the Catgut Acoustical Society, that led Schelleng to write his landmark paper, "The Violin as a Circuit" (*JASA* Vol. 35, 3, 326-338 March, 1963).

It would be hard to underestimate the impact of this work, which, as former *CAS Journal* editor Jeff Loen noted, is still cited by many contemporary researchers. To those who knew him, however, the best part was not the published work afterward, but observing how he analyzed a problem beforehand. His approach was unfailingly clean and uncluttered, often producing results based on the simplest of experiments with the simplest of equipment. Carleen Hutchins recalls that many a thorny problem was solved after sitting around a table having a lucid conversation with Schelleng. His profound insights, musical ear, and far-reaching organization were often tested during his years of acoustic research, and he said that the peculiarities of the violin's shape and materials were certainly not selected with regard to convenience in analysis. He set the bar high, and got the octet off to a great start!

Recording the Violin Octet

Robert Spear takes a look at what appears to be a straightforward exercise and finds that small differences add up to big changes. It isn't as easy as just putting two microphones up on a pole.

Instruments of the Violin Octet can bring many changes to the world of stringed instrument playing and recording. Some of the differences are striking, but others are subtler. Among these is the problem of making a recording that at least comes close to displaying the characteristics of the octet that are so obvious to the listener in live performance.

The Microphone,

No microphone "hears" sound as we do, or has the benefit of the psycho-acoustic processing of our brains; a microphone is simply a transducer that takes acoustic pressure waves and transforms them into electrical voltages. But each microphone does this a little differently, and each type imparts a characteristic sound of its own, which is where things start to get interesting.

Condenser (more accurately, *capacitor*) microphones are common in field recording today because of their small size, light weight, relative ruggedness, and extended high-frequency response. The trend in modern microphone design emphasizes the higher frequencies, but this type of microphone does not work well on bowed stringed instruments in general, or the violin octet in particular, because octet instruments already radiate considerable energy in the upper frequencies.

The situation in the lower frequencies is not much better. By design, cardioids and other polar patterns (except omni-directional) usually exhibit pronounced low-frequency attenuation, sometimes beginning as high as 400 Hertz or more. To put this number in perspective, the lowest note of the violin--a soprano instrument-- lies at 196 Hz! Some microphones are down 9 decibels or more at the lowest note of the contrabass--an eightfold attenuation of low frequencies!

The incisive nature of the condenser microphone, which was a benefit to recordings on analog tape, became too edgy and harsh in the digital realm. Engineers discovered that the venerable ribbon microphone, with which so many great orchestral recordings were made in the 1950s and 60s, produced a more characteristic string sound with digital recorders. These microphones also did a fine job of pulling out the middle voices. Unidirectional ribbon microphones also do not have the low-frequency rolloff of condensers, but they do roll off in the higher frequencies around 13 kHz, which is very low by today's digital standards.

A Hole in the Middle.

Conventional string ensembles, which consist of violins, violas, cellos, and basses, have an acoustic envelope skewed toward the higher frequencies, which are perceived as "brighter." They also have a hole in their spectrum between the two upper and the two lower instruments. The octet, on the other hand, presents not only an extended frequency spectrum, but one that is centered and balanced. To our ears, accustomed to the tilt toward brightness, the octet at first seems to have a "darker" tonal quality.

An historic photo of a recording session at Fine Studios, New York City, probably for the 1978 Musical Heritage Recording of Frank Lewin's music. Note the use of closely placed, individual microphones for each player. From left, Daniel Mankovitz, Harold Coletta, George Ruggiero, and Charles McCracken.

For the recording engineer, the presence of a complete and balanced set of lower and mid-range instruments presents an interesting challenge. This portion of the musical range, where the altos, tenors, and baritones play, has always been difficult to record cleanly, and even the best condensers tend to be weak in this range. Engineers can compensate by using a technique known as "close-miking" where each instrument is assigned its own microphone and each microphone is recorded to its own track. This allows balance and volume to be corrected and frequencies to be equalized after the recording session is completed. However, much of the recording of octets done to date has been of live performances directly to two-track stereo, and there is little opportunity to "fix it in the box" afterward. Given the need to get it right the first time, the question arises of whether today's recording equipment and techniques are up to the task.

Analog vs. Digital.

Criticisms of the "digital sound" arose from the beginning, and many people felt that digital recordings lacked the warmth and smoothness of their analog counterparts. The reasons for this were at first ascribed to the low bit depth and sample rate of

the CD Redbook standard, and then later to the lack of emphasis of the even harmonics that was typical of analog-era tube equipment. It now appears that the culprit has been digital "jitter" and clocking errors, and to the dithering that takes place during digital format conversions. Some of the latest analog-to-digital (A/D) converters are astoundingly clean and quiet, and provide a sense of depth and spatial separation that equals, if not surpasses, analog. Digital recording is also free of analog machine transport artifacts such as wow and flutter. Recording at higher sample rates and greater bit depths has increased the dynamic range of recorded music beyond the best analog equipment with unheard of signal-to-noise ratios. With the advent of Sony's "super audio" format, which samples a mind-boggling 2.822 *million* times per second, even the veterans of analog admit that at least parity has been reached.

A Place in Space.

Microphone placement must also be reconsidered when recording the Violin Octet. Close-miking is still possible, but the octet instruments put out so much power that input levels must be turned down, or the microphones must be moved back, to achieve good results. Multiple-microphone techniques can be employed, but each recording engineer will have his favorites.

I record with 2 figure-eight condensers in a Blumlein configuration, or two uni-directional ribbons with a full-range omni-directional condenser mic dead center. I will vary this somewhat depending on how the musicians sit or stand on the stage. Hutchins Consort, for example, plays with the smallest violin on the left and the large contrabass on the right, while Albert Consort sets up with both basses in the center. By the way, be aware that the octet basses are impressively powerful and will not need boosting. I'll keep the mics within 5 or 6 feet of the nearest performers, and I'll raise the mics only to ear level to capture a recording that is heard the way someone sitting in the audience would hear it. I try for a sound that blends the intimacy of a small ensemble with a sense of greater spaciousness. If I use a mixer, it's usually just for balance, and I'll go direct to stereo. Joe McNalley of the Hutchins Consort also likes to keep it simple, "My take on recording the octet is to use a stereo coincident pair with each instrument equidistant [from the mic --ed.]. Let the instruments and the players do the rest."

Not many audio engineers have had any experience recording full octets and subsets of the New Violin Family. One who has is Alfred Butterfield Grunwell of Finger Lakes Recording in Ithaca, NY. Grunwell's firm specializes in location recording, and Grunwell thought he had heard it all until I asked him to record several concerts of Albert Consort in preparation for recording the recitals and concerts presented during Octet 2005. Grunwell says, "The instruments are hugely deep and rich and full-frequency within their playing parameters. I chose active ribbon microphones to capture their warmth and mid-low power, set in conjunction with a pair of phase-coherent cardioid condenser microphones to capture air and rosin. I tend to mic closer than most, and find I get best results with the ribbons ten feet in the air and the condensers on the floor, both in a coincident pattern and both at the lip of the stage centered directly behind the conductor. It gets a better sense of the power these instruments produce. One can really feel the energy pour off the stage, and that's exactly what I'm trying to capture." ♫

The instruments are hugely deep and rich and full-frequency within their playing parameters . . . One can really feel the energy pour off the stage, and that's exactly what I'm trying to capture.

. . . A. B. Grunwell, recording engineer

Alvin Brehm pays an original deep-ribbed contrabass at Fine Studios for a recording session in the 1970s. Can you identify the unusual microphone being used?

Acoustics, from p. 3

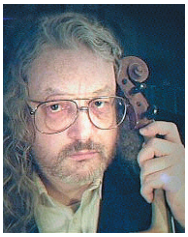
length that had the body resonance (wood) in the right place on the open second string (D). But, the main air mode of the little cello was too low. So, I went to work to reduce the deep ribs in an effort to raise the air mode to the frequency of the open third string (G). I did this in four stages. Each stage meant removing the back, cutting the ribs down several centimeters at a time, gluing new lining strips onto the ribs, regluing the back plate on, reassembling and stringing up the little cello like a viola, A-D-G-C (high to low), until the air mode was up to the desired open G -string frequency. Both Saunders and Schelleng had remained skeptical of the whole process, but when Schelleng, who was a fine cellist, put a bow on our slim little cello, we could hardly believe our ears. We had a beautiful, big *viola* sound they had never heard before.

This was the start of the New Violin Family, which has proven very successful based on *having the two big resonances, air and wood, on the two middle strings.* Then we were faced with the development and construction of new instruments of the violin family from a tiny treble to a 7-foot contrabass--seven instruments, one at each half octave, spanning the range of the piano keyboard. When I was about halfway through developing and constructing these instruments, I learned, much to my amazement, that the same idea had been described in 1619 in a book on stringed instruments that included the *concept of a balanced consort of violin-type instruments nearly as Brant had wanted.* ♫

Hutchins' series on violin acoustics will continue in the next issue.

The Historically Informed Alto

Patrick Tobin discusses two instruments that are clear predecessors of the Hutchins alto violin-- the instruments made by August Diehl and Ramon Parramon about 100 years ago. He relates their histories and tells us what it's like to play them.



The Alto violin has recent precedents that foreshadow today's Octet instrument. Early in the last century, a trend from horizontal back to vertical had begun. Two instances in particular are of interest and demonstrate efforts to solve the "viola size problem," which forms a direct link to today's New Violin Family alto.

In early string compositions up to the pre-Baroque period, five-part writing was the norm with two inner voices-- the alto viola and the tenor viola. Two different-sized instruments occupied these niches and were sized accordingly but not necessarily acoustically. Then, as now, a compromise had to be made in order to accommodate the span of the human hand and the reach of the human arm. Today, only the alto survives as the "conventional" viola of the "classical" orchestra with a body length between 15 1/2 and 16 1/2 inches (394- 419 mm). The 18 to 19-inch (457-483 mm) tenor viola fell into disuse as the cello took over the tenor duties. Many individual instruments were cut down in size while others, such as the Stradivarius "Medici" tenor and the Amati Baroque tenor, ended up in museum collections.

By Haydn's time, four-part writing was fully the norm and the smaller alto predominated; usually played as a second instrument by violinists. Tenor violins, played vertically, persisted into the late Baroque but were tuned an octave below the violin, unlike the tenor viola, which is tuned a fifth below the violin. It wasn't until the 20th century that the viola was even considered as a solo instrument worthy of virtuosic treatment. It was still played like the violin; horizontally under the chin.

Diehl tenor viola.

Within the last 130 years, two vertical violas appeared. One is the August Diehl (1852-1922) tenor viola that was the personal instrument of Lloyd Loar, an active performer, inventor, and acoustical engineer at the Gibson Guitar Co. in the 1920s. Loar was responsible for introducing plate tap-tuning to Gibson's guitar and mandolin lines. His personally signed mandolins are in high demand today among collectors and Bluegrass musicians with prices soaring into the 6-digit range.

Loar's 18-7/8 inch instrument was made in 1878 and was originally intended to be played on the shoulder. Loar made several modifications to his Diehl viola, and the one of interest here was the installation of a cello-style endpin for vertical playing. This is the earliest vertical viola I know of. A skilled performer and arranger, Loar toured in the early part of the last century with the Fisher Shipp Concert Company and the Gibsonians promoting Gibson instruments. Loar also made an electric vertical viola, patterned after the Diehl, but with a solid body (possibly the first electric bowed string instrument). On November 12, 1935, he took out a patent (#2,020,842) on this creation Apparently, even his concert vertical viola was inadequate for larger venues.

R. Parramon playing his patented "tenor viola."

Parramon tenor viola.

The other instrument of note is the tenor viola patented by Ramon Parramon of Barcelona, Spain. Parramon's deep-ribbed instruments were made beginning in February 1932. Parramon was a cellist and businessman who employed violin and guitar luthiers Jacint and Angel Pinto in his shop. His Tenor Violas, as he designated them, were actually made by Jacint Pinto. Angel Pinto's descendants still run the shop today; still located in Barcelona, Spain.

The Parramon tenor viola was available in three quality grades and varied slightly in body length. The ribs were between 3 and 4 inches tall (76 - 101.6 mm) resulting in an instrument sized like a 1/4 child's cello but lighter in construction. Parramon shop records indicate that 55 of these instruments were made between 1932 and 1935. Other details are incomplete due to the destruction that occurred with the Spanish civil war. Jordi Pinto indicates that one instrument (#55) was returned after being destroyed in shipment. Two tenors are still in the Parramon shop on display along with the surviving original molds (one other is lost). Two more are located in a violin shop in Tacoma, Washington and are not currently for sale. One made especially for Pablo Casals resides in the Villa Casals museum in El Vendrell on the Spanish coast, and another is held in the Madrid National Library. This accounting leaves possibly 48 deep-ribbed alto violins in circulation (or more likely in closets and attics).

Pablo Casals was involved in promoting and judging of the *Premi Parramon*, a yearly performance and composition competition for Parramon's instruments that began in 1924. The last was held in 1935 just before the civil war. I have been unable to find any exact information or copies of the music that resulted or even if the contest actually occurred.

I have both a 20-inch and a 21-inch instrument, numbers 38 and 19, respectively. The smaller of my Parramon violas and the two lesser-grade

instruments known currently in Washington State were once owned and played by True Sacrisson, a cellist, professor, and a founding member of the Catgut Acoustical Society (the predecessor to the NVFA)! So here we have come full circle with the early vertical viola directly associated with the New Violin Family alto. While Parramon and Loar protected their advances with patents, I have come to appreciate Carleen Hutchins' wisdom in not patenting the New Violin Family Instruments. I have seen again and again how this becomes a barrier to acceptance and dissemination of worthy and valuable new ideas.

Bows.
Loar used a lightweight standard cello bow with his instrument. I am fortunate to have two fine Parramon bows made in France especially for the tenor viola. They are like a 7/8 size viola bow with a head and frog sized between a typical viola and violin bow. One weighs in at 67 grams and my favorite, with a bit stiffer stick, weighs 66 grams. I prefer the agility of the Parramon bow but a cello bow gives a wider usable string contact area. I tend to get too close to the bridge losing control of the Helmholtz string motion with the Parramon bow. As an experiment, I have an inexpensive cello bow that I am carving fluting along the stick like a baroque bow in an attempt to bring it closer to the Parramon in weight. I prefer the higher head and frog of the cello bow but find myself needing the Parramon's agility. I have a reproduction Baroque bow, recently made by David Van Edwards of London, that I loaned to Carolyn Aquallo, alto player in the Hutchins Consort, for the Octet 2005 convention. I noticed that the tenor player in the Hutchins Consort also used a lighter Baroque bow.

Compared to either of the two historical precedents in my possession, [the Hutchins model alto] is, without question, far superior in tone and playability.

. . . Patrick Tobin

Playing comparisons.
The Parramon instrument has a deep, reverberant tone, but lacks the clarity and projection of the Hutchins model. The two lower strings are slow to speak, unlike the octet alto. I haven't yet had the pleasure of playing one of Carleen Hutchins' own creations, but my alto by A. H. Ritter, built in 1978, is on the Hutchins model. Compared to either of the two historical precedents in my possession, it is, without question, far superior in tone and playability; even more so vertically. I find myself coming back to it and even wanting to practice!

It is informative as to developing an alto technique (coming from viola) with its deeper ribs. I use a modified shoulder rest--a kind of "knee rest"--with my A.H. Ritter (1978) alto in order "extend" the ribs to place the body farther out similarly to the Parramon instrument. I can't help but wonder what could have been if the destroyed Parramon tenor viola were to be rebuilt and plate-tuned as a New Violin Family alto with 75+ year old wood and shallow ribs!

Playing the Alto.
I am 6'- 4" tall with an arm span of six feet, seven inches. I have played my Ritter alto under my chin for a season as section leader in a community orchestra. The alto violin is the first instrument in viola tuning that has been able to hold its own in an orchestral setting. I can hear myself even in the loudest passages and orchestral *tutti*. Going on two years since then, I've been playing the alto vertically. I find that even with my long reach, expressive playing is easier and access to the higher positions is quicker--and more accurate.

A cellist tends to hold the alto like a cello, with the scroll near to the left ear. This causes them to raise both arms as the alto string length is much shorter, which is uncomfortable for me with my very long arms. I rest the scroll on my collar bone, centered under my chin. I like to have the alto angle away from my knees because I get a more direct sound and my bow arm comes closer to the position of a standard viola. This has become a very familiar position for me.

♫

. . . Lighter Moments . . .

The scientific way of determining whether or not a tree will produce good tonewood.

NVFA News Briefs

Web Site Forums.
Our NVFA Internet Forums <nvfa.org/forums> went online May 8, 2006. The forums give members and guests a place to meet in cyberspace. The forums consist of a General Discussion area for members and guests, and five forums in which only members can post--Acoustics Lab, Luthier's Bench, Players' Round Table, Varnish Room and Composing and Arranging. Special thanks to Web Master Tim Trott for all his help during the setup period.

Web Site Usage.
The NVFA web site completed its first full year (May, 2005 to end of April, 2006) with a growth in activity of approximately 33 percent. At the end of the first year, our site was recording between 100 and 150 visits per day. Web site traffic is increasing in all measurable categories and has already surpassed the spike that occurred in October, 2005, the month leading up to our first convention.

Statistics show that the Internet was the most frequently used source for news and information just prior to our convention, and this is a tendency that should strengthen in coming months, especially with the opening of the NVFA Forums.

Other changes will be coming to our web site as well. Look for the Octet Shop where you'll find a number of interesting things available for purchase including compact discs, sheet music, octet technical drawings, luthier's kits, those hard-to-find cases and bags, bows, strings, rosin, and lots of other goodies.

New Email Address.
<nvfa@metrocast.net>
After enduring deteriorating conditions with the central office Internet dial-up connection, the arrival of cable television on Taylor Drive allowed the office to take advantage of high speed cable internet and email connections. Office Secretary Sue Taylor said that the old connection was so unreliable it sometimes took eight tries to send a single email! The new connection allows the transfer of large graphics and audio files to and from the central office, something that was impossible under the old system. Taylor asks all members to update their address books and begin using the new address as soon as possible. The old address has now been discontinued.

Organizational Changes.
At the NVFA board meeting of June 17, 2006, changes were instituted in the distribution of functions within the association. F. Scott Ponicsan becomes executive assistant for financial affairs and Robert J. Spear becomes executive assistant for [daily] operations. Carleen Hutchins continues as Executive director.

Four new working committees were also created: Membership, Finance and Funding, Media Coordination, and Octet Expansion. Not all committees had chairpersons at the time this issue went to press.

Other NVFA Changes.
Trustees Dean Richardson and Edith Munro have resigned from the NVFA Board of Directors, and Carolyn Wilson Field has resigned from the advisory board. We thank them all for their time and contributions to the association, and wish them well in their future endeavors. Mark Goldberg, son of trustee Lin Tollefsen, has joined the advisory panel. This makes the second mother-son pairing in our association, the other being Trustee Sharon McNalley and her son, Trustee Donald Joseph McNalley. Goldberg is also serving as an advisor to the Media Committee.

Chien Tan Vivaldi Video Wins CINE Golden Eagle Award.

Chien Tan's self-produced DVD video of her performance of the Vivaldi "Goldfinch" Concerto on the treble violin was the first of its kind and quickly sold out. Now we have learned it also was awarded a spring 2005 CINE Golden Eagle award for excellence in documentary and other informational and video production. Founded in 1957, CINE represents a consortium of business, education, and government interests to depict American life and thought realistically for a global audience. CINE competitions are held each fall and spring, and in 2005 more than 450 jurors adjudicated more than 1,000 submissions. Tan's "Goldfinch" received one of only two awards in the subcategory of "Variety, Performance, and Music Video." The winners receive a distinctive certificate. Although the DVD is sold out, you can view it without cost on Tan's web site, <www.trebleviolin.com/video_full_mov.html>.

Octet Construction Plans.
Octet makers can presently purchase blue line drawings, or full size "Xerox" type copies, of our original mylar drawings in order to make new sets of instruments. In 2001, architect Ted Sheridan began re-drawing these plans in digital format. The computer-drafted plans will be similar in the way they describe the geometry and dimensions of the instruments. Computers can generate smooth, complex curves which are difficult to draw manually. They can also format dimensions, text and notes in a clear and compact way, allowing for more information to be placed on a given sheet.

The computer drawings are in their final stages and will be available this fall from the New Violin Family Association. Each drawing will be available in three formats: PDF, DWG, and DXF. A PDF file is a worldwide standard file type for printing. Viewable with free software such as Adobe Acrobat, a PDF file can also be viewed on a computer screen and printed out in sections on small sheets of paper.

DWG and DXF files require a drafting program, like AutoCAD, to read them. They differ in that drawing data is defined by mathematical formulae. Drawing files can be adjusted, used for analysis, scaled, and used to drive laser cutters and milling machines. It would be possible, using laser cutting technology, to cut extremely accurate blanks for various parts of the instrument body. ♫

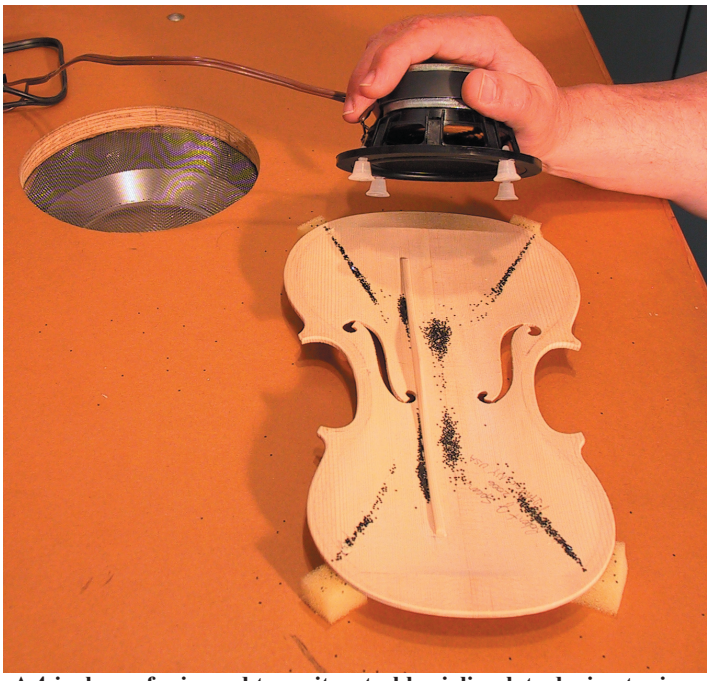
A Luthier's Workbench

Tip #9. Working at the Extremes of Size.
Carpenters say that a good worker knows when to bring the wood to the tool and when to bring the tool to the wood. Luthiers have similar problems when constructing the largest and smallest octet violins. I have heard complaints that it is hard to get good patterns on the small bass and treble violin plates. Because the octet instruments are all violins, they should behave alike during tuning. I suspected that the problem was the speaker used to shake the plates. A large woofer can't be focused on the relatively small areas needed to make patterns appear in the treble violin.

In the photo below you can see a well-formed mode 2 pattern in the top of a treble violin. Instead of trying to fit the plate over a large speaker (as seen on the left through a hole in the table), I hooked up a small (4") woofer and held it in my hand over the spot that drives mode 2. Four-inch drivers are not expensive and can be ordered through firms dealing in raw speakers or from catalogs of car audio equipment. Speakers designed for ported enclosures work better, and try to get one with a vented pole piece.

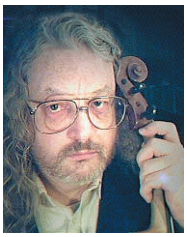
Because the woofer can be brought close to the plate, less drive power is needed and the tone burst can be shorter. Modes form quickly and clearly. I rarely use the woofer mounted under my bench any more because the hand-held woofer is much easier to use, gives better results, and leaves less mess! You could even have both top and back plates set up side by side to compare patterns, something difficult to achieve with undermounted speakers.

--RJ (Bob) Spear



A 4-inch woofer is used to excite a treble violin plate during tuning. The white cones on woofer protect the forward-roll of the speaker surround when the speaker is not in use.

People in the News



Alto violinist, musicologist, and part-time luthier **Patrick Tobin** has relocated from Portland, OR to the equally soggy climes of Ithaca, NY. Tobin left the Octet 2005 Convention inspired to do more with his alto playing than he was able to achieve in Portland where, he said, he felt isolated as the only vertical alto player he knew about. The opportunity to do more playing and to get more directly involved in the activities of the NVFA were prime considerations in making the move. We welcome Patrick, and we are happy to present his first article for us, "The Historically Informed Alto" on page 9.

NVFA newsletter editor **Bob Spear** has had an unexpectedly busy year. On June 5, he traveled to Rhode Island to deliver an invited paper for the session on musical instrument scaling at the 151st meeting of the Acoustical Society of America. Spear spoke to an audience of about fifty acousticians about the practical aspects of violin scaling at a session chaired by Dr. George Bissinger. On June 17, Spear was in Wolfeboro to attend the biannual meeting of the NVFA Board of Trustees.

On July 6, Spear delivered an invited talk at the Oberlin (OH) summer session violin course on setup, directed by violin maker David Burgess. Spear's well-received talk before about 30 violin makers drew heavily on his experiences scaling octet violins, and he made the point that setup for sound actually begins during construction. Spear augmented his talk with examples of several octet instruments including a soprano, two models of mezzos, an alto, a small baritone, and a contrabass.

A participant at the Oberlin Acoustics Workshops was **Oliver Rodgers**, who has also spent years researching violin acoustics and is a long-time supporter of the Violin Octet. In addition to Rodger's famous traveling acoustics lab, mounted in the modified bed of a Ford F-150 pickup truck, he brought a mezzo violin and an alto violin, both of which were started in the late 1970s. Rodgers said that the parts were assembled and the instruments varnished by Pamela Anderson and colleagues at her shop.

Baritone violinist **Akua Dixon** has recently recorded a few selections for her husband, Steve Turre's, next CD. She has also performed a new work by Rufus Reid, "Linear Surroundings," at the Ravinia Festival in Chicago, the Kingston Jazz Festival in New York, and at a fall performance in Vermont. You can keep up with Dixon at www. jazzbows. com.

Long-time violin acoustics researcher **George Bissinger** made several presentations at the Oberlin summer session on Acoustics. Much of Bissinger's presentation drew on his work with octet instruments because, as he notes, no similar work has been done on conventional stringed instruments, and observations of modal relationships in the octet instruments of varying sizes provides a lot of information that cannot be obtained in any other way.

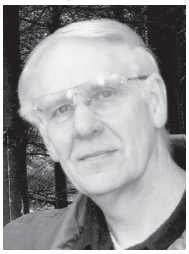
The Seattle, WA shop of **Hammond Ashley** must move because its present location is in the way of an airport expansion project. Members who have been with us from the days of the Catgut Acoustical Society will remember Ham Ashley as a very active and supportive member of New Violin Family instruments. He probably made more octet contrabasses than any other individual, and his location in the Pacific Northwest allowed to him to cut spruce and maple trees for wood. Ashley supplied a number of Catgut Society members with the raw material for their instruments.

Over his many active years in violin work, Ashley accumulated a mountain of wood cut especially to size for octet violins. At his death in 1993, over 60 sets of wood for the contrabass alone were in his Seattle storage yard, according to shop manager Bryce van Parys. About the same number of sets remained for the small bass, and a lesser number for the baritone. Eight hundred tops for cello or tenor were on site, and a large number of pieces for violins and smaller instruments as well--about 2,000 according to van Parys. Ashley's former partner, David Wilson, said the firm got out of the wood supply business about ten years ago as a consequence of the influx of inexpensive tonewood from Europe, and that the unsold inventory was put in storage and largely ignored.

The eviction order caused by the airport runway expansion project seems to have caught the firm by surprise, and it became necessary to liquidate the wood inventory quickly. The firm decided to sell to buyers in truckload quantities, which did not leave enough time for the NVFA to find investors willing to underwrite a large acquisition or to arrange for storage facilities. As a result, the wood cut especially for new violins did not go to the association that created them, but to a number of west coast bass makers and wood dealers. ♫

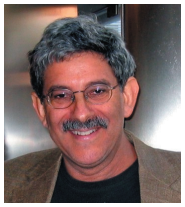
Letters to the Editor

Forum Gives 2nd Chance.
The NVFA Forums look like a good idea. I just registered and was a little concerned when I promised not to be objectionable or offensive. I thought working on Octet instruments was inherently a bad thing to do. I do have lots of Octet questions and missed some chances to ask them at the Ithaca conference, so the Forums give me a second chance. I haven't asked [elsewhere] because I am not usually in the mood for [abuse].



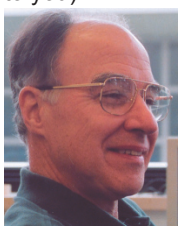
*-- **Marty Kasprzyk** is a violin researcher with a particular sense of humor.*

OCTET 2005 Convention.
The remarkable thing about the November 2005 New Violin Family Convention was how beautifully it blended so many areas of musical life that in the normal course of things are kept apart. At the concerts, new music and old lived side by side. In conference sessions, there were remarkable and many-faceted conversations between luthiers and players. We were all able to take home some fascinating new insights from these dialogs--and the seeds of future work. The freedom and generosity of everyone's give-and-take was stimulating and refreshing. And I won't soon forget Grigory Sedukh, a marvelous exemplar of the rather conservative and beautifully worked-out tradition of Russian violin playing, getting in the improvisation class and jamming like crazy! The final concert was wonderful, with the instruments exhibiting great clarity and dynamic range. All of this is hardly a surprise given the nature of Carleen Hutchins' work, of which the conference was a wonderful celebration.



*--**Stephen Nachmanovitch** is a master improvisor who uses the mezzo violin extensively in his work.*

ASA Meeting 151.
I must say that your instruments make me a believer in the octet sound. Before, [octet violins] were merely interesting in the scientific sense. I got a lot of compliments on the scaling session afterwards. And from some pretty hard-nosed people who work for the military-industrial complex. I do believe it made an impression on them that by combining theory *and* practice of octet scaling that there really was a little gold at the end of the refractively dispersed mini-sphere light spectrum (rainbow to you).



*--**George Bissinger** chaired the session on musical instrument scaling at the 151st meeting of the Acoustical Society of America.*

More on Alto Fingering.
I took my alto to the Loft Violin Shop in Columbus for peg work. You should have seen the swirl the alto created in the shop! *All* the employees, including the owner, salespersons, luthiers, *and* the customers congregated to hear the instrument. One Ohio State student (a violist) working at the shop said, "I want one!" They were all amazed.! The shop owner and the staff who are cellists concluded that cello fingering was appropriate. Right now, I need to learn the instrument. I think a cello instructor would be more appropriate; violists push the viola style too much. I am seriously thinking of using gamba bowing as well to relieve the arthritic pain in my wrists. The gamba bow sounds pretty good with the alto violin. People need to think outside the box, otherwise there would not have been Stradivari or Octet violins. We'd be stuck with rebecs!
- - Arnold Dengler *is an attorney in Ohio who has just discovered the world of octet violins.* [For more on the various approaches to alto playing, visit the "Players Round Table" on our Internet Forum <www.nvfa.org/forum> -- ed.]

Hutchins Consort at GAL.
I thoroughly enjoyed the sound of the Hutchins Consort, and it was a revelation to actually hear eight instruments sound as one. It truly did have the effect of one grand violin with a great range and a smooth, luscious voice. I was not skeptical that such a unified voice could be achieved, but I was surprised at how successful the effort has been. It has inspired and informed me in a powerful way of the full potential for the deliberate shaping of an instrument's voice. Carleen Hutchins success with the Octet has shown me that this goal is achievable, not only from one instrument to another, but within the voice of a single instrument.

-- Todd Rose *is a guitar maker in Ithaca, New York.*

Membership Policy

Annual Dues.
$50

Duration.
Membership runs with the calendar year from January 1 through December 31.

New Members.
If your payment is received on or before September 30 of a given year, you are considered a member for that year. You will receive all materials, newsletters, etc., for that year.

If your dues are received on or after October 1 of a given year, you are considered a member for the entire following year and your membership benefits will commence on January 1.

Renewing Members.
Membership renewals are due by January 1. There is a 60-day grace period. Any member whose dues are not received by March 1 will be considered in arrears.

Payment.
Payment may be made by check payable to the "New Violin Family Association" and sent via U.S. Mail. We also accept MasterCard and Visa either by mail or by phone. The payment form on our web site <nvfa.org/membership.htm> is always available. Web payments go through our PayPal account, and foreign members should note that PayPal handles currency conversions automatically.

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603 569 7946
nvfa@metrocast.net

Is This Your Last Issue?
A Letter from the Editor

Dear Reader,

When the New Violin Family Association was formed in 2000, and during the period of transition when the central office moved from Montclair, NJ to the present offices in Wolfeboro, NH, the mailing list for this publication was a mixture of many names old and new, and only one newsletter, Vol. 1, No. 1, edited by Carleen Hutchins, was issued during that time.

When I became the editor in 2003, our mailing list consisted of over 1500 names, but it was getting out of date. Many of the names on the list were not on our membership roster. Still, in the hope of kindling interest, we made a decision to send the newsletter to every name on the list, and we have continued to do so for all numbers in Vol. 2, including this one.

It would be a sad moment if we had to drop some names from our list, but, unfortunately, the situation has reached the point where we must consider this unwanted option. Every one of our production costs has risen, as has the cost of mailing, to the point where we will soon need to pare down our expenses. That means that if we don't hear from you, and if you don't renew your membership, we may have to drop you from our list. Like most small organizations, we derive the bulk of our revenue from membership dues, and like all organizations, we must balance our books so that expenses do not exceed income. We need you on board to realize our mission.

It has been a great joy for me to edit and produce each newsletter. When a completed edition went to the printer, I was a truly satisfied man. I know Carleen Hutchins and the Board of Trustees shared this joy of outreach, and all of us hoped that you, our readers, got a smile on your face when this little messenger from us arrived in your mailbox.

While you are reading this issue, I am already working on the next, and I can tell you that there are some surprising and exciting things to report. We hope to share the good news with all of you, and we hope that you will have some good news for us by not only remaining a reader, but by becoming a member of the NVFA as well. Our membership policy is explained on the facing page, so please take a moment to fill out the enclosed form and become a member. Join with us as we spread the word and the sound of the Violin Octet!

Thank you.

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Officers & Board

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The NVFA encourages the distribution and dissemination of information about the new violin family octet, performers, composers, and luthiers. Permission is granted for fair use of any material appearing in the newsletter with proper attribution of its source. Please notify the editor when making such use.

We welcome submissions for articles, Letters to the Editor, Luthier's Workbench, and Lighter Moments. Please include your name, address, and a small photo of yourself (digital format preferred). Send concert and event notices to <rjspear@zoom-dsl.com> or PO Box 6562, Ithaca, NY 14851.

We have a new email address!! nvfa@metrocast.net

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Important Information about Your NVFA Membership

The New Violin Family Association has instituted a new policy concerning membership and dues. All memberships now renew and all dues are payable by January 1, 2007.
Please read the particulars in this issue on page 14.

Annual Membership Dues $50.00. I am a new_____, renewing _____ member.

Mr., Mrs., Ms., _____

Street, Apt. No. _____

City, State, & Zip _____

Enclosed please find my check ___, MasterCard ____, or Visa Card _____ (check one)

Card Number _____ Expire Date ____/____

Name as it appears on card _____

Contact me by phone (____)_____ email _____

Please make checks payable to the "New Violin Family Association" and send via U.S. Mail to the address below. We also accept MasterCard and Visa either by mail or by phone. The payment form on our web site <nvfa.org/membership.htm> is always available. Web payments go through our PayPal account, and foreign members should note that PayPal handles currency conversions automatically.

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