

The effect of extended playing on the tone of new violins

Mead C. Killion

Etymotic Research, 61 Martin Lane, Elk Grove Village, IL 60007

There is an old wives tale that says violins need to be played to sound good. Not only are new violins afflicted, but a long-unused violin, it has been claimed, needs to be played before its former tone will be restored.

It has also been rumored that many successful violin makers arrange to have new fiddles played extensively before they are offered for sale, the increased value of the fiddle — it can be presumed — easily covering the cost.

It was from Carleen Hutchins that I heard the first scientific evidence for the hypothesis that extensive playing improved the tone of violins. In an informal, but carefully-controlled experiment, she took four freshly minted violins of similar quality, spread them out on the kitchen table, and had violinist friends judge their playability and tone quality as they visited. All four were judged roughly similar. She then connected two of the violins to a source of vibration, attaching a thin wood bar between the violin bridge and a loudspeaker driven by an amplifier which was fed continuous classical music. Via this bar-to-bridge driver, those two violins were “played” for three months — a total of 1500 hours.

At the end of the exercise period, she again spread all four violins out on the kitchen table and had them judged by visiting violinists as they came. All selected the two violins that had been “played” as markedly superior, citing that they spoke more easily and had a much better tone.

I heard of this experiment several years ago, and — with some mental reservations — assumed that some sort of benefit to fiddle physics might be caused by extensive playing. My own playing was so marginal that I assumed that I would not notice the difference myself even if I should run into it.

MY OWN EXPERIENCE

Thus, when I started playing the violin again a few years ago, I ascribed the gradual improvement in the tone of my 95-year old violin as I practiced to just that — practice — and the few lessons I had taken.

Two years ago, I found that a viola fit nicely in my hands, and my fingers dropped into intonation almost immediately (taking into account the fact that my violin intonation is not always perfect), and I was delighted to be able to acquire a fresh new viola from Carleen Hutchins. It had an excellent, powerful tone, and I was pleased with it from the start. The only disappointments were that the tone wasn't as even as I would have liked and there were a couple of notes with which I had trouble (B on the G string was particularly striking). When I did make those notes sound, I had trouble controlling their tone. Overall, it was a fun instrument to play, although I didn't play it much the first year. Within the last nine months, however, I have been playing Carleen's viola more and more.



Mead Killion with his viola.

And the tone has been getting sweeter and sweeter; so much so that I am now amazed at what a beautiful sound I can get from that fiddle. It speaks easily and there are no funny notes.

Was the dramatic improvement in the viola tone caused by improvements in me or by improvements in the viola? How would I know? For me, the compelling argument is the comparison between the sound of the violin and viola. I played both instruments about the same amount of time during the period in which the viola acquired an exquisite tone. The tone of the violin did not change during that period. My viola playing surely improved during that period, but the change in viola tone is **much** more dramatic than the original change in violin tone when I started practicing my old violin regularly. Since that change was from rank-amateur fiddle player to fair-to-middlin' fiddle player, and I started out as a fair-to-middlin'

viola player (which is where I am now, although I know more tunes), I am personally convinced that the important change was in the viola and not in the player.

A POSSIBLE PRODUCT: THE CLOSET VIOLINIST

I am now also convinced that there is a market for a *Closet Violinist*, a battery operated vibration driver which would clamp onto the bridge something like a mute, but would otherwise fit under the strings. It would drive the bridge with classical selections programmed on a "PROM" memory chip. The memory requirements would be modest (even with double stops), since only the frequency and time of the notes need to be recorded (square-wave drive should be adequate to exercise the fiddle). Thus many selections should be practical. The PROM approach is my preference, but an FM radio chip could be substituted so the user could choose classical or rock exercises. (Rock might well be better, because it is recorded at nearly constant high-level output and would provide greater average amplitude. No one need ever know, of course.)

The product is technically practical. We at Etymotic Research have several IC designers as regular consultants, and they have assured me that the electronics would be no problem. Similarly, the vibrator could be a standard hearing aid "bone knocker," which would probably provide sufficient driving force.

One imagines playing duets with the CLOSET VIOLINIST, or using it at parties. A MIDI input would allow synchrony with electronic grand piano players. Adding the requirement for natural dynamics would require a higher-price version unless some foot-pedal control was used to allow the human partner to control playing intensity. For the latter purpose, additional memory would be required to allow vibrato, or else the repertoire would need to be restricted to PRESTO selections. Perhaps the natural-dynamics-with-vibrato version could be called the VIOLIN PARTNER.

As far as market research goes, the fact that I would like to buy one for myself convinces me there is a market. Surely there are countless violists who have good but unused violins in the closet gathering arthritis. Each of them would want one to allay guilt feelings about leaving a fine violin unplayed. This is not counting violin makers, who could hardly afford to be without several.

The problem with any product such as the CLOSET VIOLINIST is not to protect the idea from someone stealing it, but to generate enough interest to get it designed. Such products require someone to be "product champion." Anyone willing to be such a product champion, willing to be the driving force to help develop this product, should contact the author at Etymotic Research, 61 Martin Lane, Elk Grove Village, IL 60007, or by phone: 708-228-0006; or by FAX: 708-228-6836.

The following personal observations on buying fiddles were not part of the original article.

MCK 95MAY8

You can buy a great Italian fiddle for \$1 million or so, or a superb fiddle made recently for little over 1% of that amount. Some violinists now choose recent instruments for concert performance because they sound so good. The fiddle makers listed below are ones whose instruments I have had a chance to hear or play myself. A check with a local symphony violinist or violist will often turn up the name of another excellent maker.

MY NEW VIOLA: I have a new 17 1/4" Carleen Hutchins viola that is magnificent. I hated to be disloyal to the viola described in the above article, but when I visited Carleen in her home, she told me that the "minor" alterations I wanted in the fingerboard weren't minor. When I tried some of the other violas she had, I fell in love with my new one, which has an even sweeter yet more powerful tone (and cost 50% more)!

A friend was concerned about my purchasing a large Hutchins viola (her violas are known for their extraordinary power), fearing it might drown out the other members of the string quartet. In fact, our regular viola player now plays that viola when we get together, and for the first time we can hear the viola part clearly all of the time. The rich tone of my brand new one, incidentally, also continues to improve with playing time. I played other excellent violas when I visited Carleen, so I know she has some left.

MY NEW VIOLIN: I recently obtained a Daniel Ling (of deaf education fame) violin. It is just as amazing to me as my viola. It has a rich, even sound suitable for concert hall or string quartet. It is even beginning to sing in my hands (partly a function of my practicing, I presume). A professional violinist friend (who has a fine Italian violin) played it for an hour and said "This is a great fiddle." Dan Ling played it again when I visited him recently, and after a few strokes he said "Oh my God!," meaning, presumably, that he hadn't charged me enough for it.

All of the makers listed below have worked with or followed Carleen Hutchins' techniques. A dramatic tribute to her contributions came at a special session of the Boston meeting of the Acoustical Society of America last year. The Tokyo String Quartet played their own old Italian fiddles and three complete sets of modern instruments (Hutchins, Curtin & Alf, and Spear & Spear). Richard Dyer ("Tokyo Quartet plays for expert ears," Boston Globe, 6/7/94) and many other attendees judged some of the modern instruments to sound as good or better than the famous-name instruments.

Carleen Hutchins
Permanent Secretary, Catgut Acoustical Society
112 Essex Ave
Mountclair, NJ 07042
201-744-4029 Fax 201-744-9197

Daniel Ling
956 Cherry Point Road.
RR3, Cobble Hill, B.C. V0R 1L0
CANADA
604-743-2269 Fax 604-743-5940

Joseph Curtin
Gregg Alf
1221 Prospect Street
Ann Arbor, MI 48104
313-665-2014 Fax 313-665-4623

Robert & Deena Spear
Box 212
Accokeek, MD 20607-0212
301-292-0914 Fax 301-292-3343