



# STRANGE MAGIC

ON QUANTIFYING THE SOUND OF A STRADIVARIUS

By Marcia Adair

In December 1881, *Blackwood's Edinburgh Magazine*, a British monthly known for its horror stories, printed what must surely be the world's first instance of Stradivarius fan fiction. Over nine thousand breathless words, Hugh Conway, an accounting clerk by day, unravels *The Secret of the Stradivarius*:

*And now a strange thing occurred to me. After holding that fiddle a few minutes, I felt a wish — an impulse — growing stronger and stronger each moment, till it became almost irresistible, to play upon it. It was not a musician's natural itching to try a fine old violin, as I am no musician... not only did I feel a positive yearning to pass the bow across it, but somehow I was filled with the conviction, odd as it was that all at once I was possessed of the power of bringing rare music forth.*

*Luigi had been watching me attentively. Seeing me turn toward him, he sprang from his seat and, before I could speak, snatched the fiddle from my hands.*

*"Ah," said Luigi, as he placed the fiddle out of sight under the table, "so you felt it also, my friend?"*

*"Felt what?"*

*"The...power, the sorcery of it.... I have only played upon it twice and the second time I drew my knife across the strings that I might never again be tempted to play upon it without due consideration. One night when I feel strong enough...I will play the fiddle to you. And then, if its music moves you as it moved me, I dreamt no dream. If not, I will say it was a dream, and I may at last be able to use this masterpiece of Stradivarius."*

When we pick up the action forty column inches later, Luigi has deigned to play the fiddle one more time, and a Frenchman turns up, is spurned by a woman, commits suicide, and collapses upon the violin, destroying it. All the while, the music plays on.

Though modern commentators rely less heavily on opium-assisted erotic hallucinations to advance their argument, the thrust remains the same: Strads are magic.

Except when they're not.

Whenever a record-breaking sale of a Strad, Guarneri or other fine instrument makes the news, backlash stories pop up along the lines of this one from the *New York Times*:

*An instrument was left with a leading house in New York who were in the habit of selling only the finest violins. A professional musician, well known for his thorough knowledge of all the old makers saw this instrument, was attracted by its appearance and, on trying it, was amazed at its purity of tone, sweetness, sensibility and volume.*

*It was a Guarnerius. There could be no mistake about it. An offer of \$250 was made, an eighth of its value. The dealer asked the owner for his approval, to which the owner replied, "I have no objection to selling it, only the purchaser should be informed that it is not old, but brand new, for I made it.*

*The musician came back, tried the instrument again and was even more fully delighted with its perfectness of tone. When he was told it was a new American violin, he at once withdrew his first bid and offered \$50.*

Even in 1878, the year the story above was printed, it was well known that confirmation bias is a slippery beast. In 2013, Claudia Fritz, a French acoustics professor, did her best to tame it — or at least give some scientific rigor to something professional musicians have long intuitively known. Her double-blind study, published in *Proceedings*

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**'THE VIOLIN COLLECTOR RISES TO THE SUBLIME HEIGHT OF DISTINCT IMMORALITY AND IS NOT A FIT SUBJECT OF ANYTHING SHORT OF UNSPARING EXCERATION.' – THE ATLANTIC MONTHLY, 1879**

of the *National Academy of Sciences*, found that twenty-one blindfolded international soloists could not identify the Strad at a rate better than chance. Even more interesting, when asked to choose their favorite instrument from a field ranging in age from three to three hundred twenty-eight years, the majority chose a modern violin. Similar results have been reported when studying wine tasting.

If there is no empirical difference in the sound, even for players, why then did everyone go crazy when the Schidlof family announced they were planning to sell their 1719 'Macdonald' Stradivari viola? That it was a viola is mildly interesting — there are only ten Stradivari violas remaining. But what made the international news was the insane reserve price of forty-five million dollars. The previous auction record, the 1741 'Vieuxtemps' Guarneri del Gesu violin, sold in 2012 for a price in excess of sixteen million dollars. The most expensive Stradivarius, the 1712 'Lady Blunt,' sold for \$15.9 million at an auction to raise money for tsunami relief in Japan.

Yet the higher price shouldn't come as a surprise. The viola is, as the *Daily Mail* so helpfully noted in its bulleted coverage, "slightly larger than a violin." It makes

sense, then, that violas would cost more — or it would if the instrument market worked on a dollars-per-pound commodity system like wheat or goji berries. For better or worse, the fine instrument market is differentiated, which means that the items in the sale pool are not interchangeable. Put another way, one fiddle is not the same as another.

Each instrument is the same weight, broadly the same shape, and made of the same six hundred dollars worth of raw materials. The differentiation comes into play when you account for each maker's philosophy and skill (both in construction and marketing), the players' existing biases and technical ability, the bow quality, and listeners' preconceptions, aural training and susceptibility to non-aural cues.

That these variables can't be stirred apart makes valuation complicated. The market doesn't care if one item is better than another. It cares if you think it is. As such, the price of a fine instrument is based on its provenance and condition, the scarcity of similar work in the same maker class, the results of previous sales, the status that owning the instrument would bring to the new owner, and how badly the present owner wants to sell.

**Priceless?** A staff member puts the 'Macdonald' viola made by Italian artisan Stradivari on a stand during a preview at Sotheby's gallery in Hong Kong



Parents who routinely ruin their childrens' lives by insisting that the lumberjack shirts at Target are exactly the same as those at Abercrombie & Fitch know well that brand-name products command a premium because humans don't make rational decisions. The instrument market operates on the same principle with an extra large helping of scarcity thrown in to keep things fun.

The first stringed stars were German Stainers, and then, in the early nineteenth century, Italian makers became ascendant. In 1878, a Strad selling for \$4,200 (\$100,000 present-day) was reported in the *New York Times* as absurd. By the 1890s, prices had moved to \$10,000 and twenty years later they were nearer \$20,000 (\$495,000). By way of comparison, in 1910, a Porterhouse steak could be had for about fifteen cents per pound. A Model T cost eight hundred twenty-five dollars.

The exponential growth in prices didn't really start until around the mid-1980s. The 'Lady Blunt' Strad, for example, sold in 1976 for \$200,000 and in 2011 for \$15.9 million. Even after adjusting for 1970s dollars, it's still a gain of \$15 million or 1,600 percent. In recent years, the fine-instrument market has exploded. A 2013 study by Brandeis University economists Kathryn Graddy and Philip Margolis found that from 2007–12, rare violins significantly out-performed the S&P 500. Even before that, instrument prices were rising well above inflation. Returns of eight to twelve percent per year are not considered exceptional.

Ric Heintl, a fourth-generation fine instrument dealer based in Toronto, tells *Listen* that he sold his first Scarampella in 1983 for twelve thousand dollars. "I was kind of curious," he says, "so I looked through my notes and saw that in 1987 I sold one for twenty thousand and in 1992 fifty thousand was starting to happen. Today, you should be thinking one hundred fifty thousand."

David Aaron Carpenter, the violist in the pale blue Duke of Windsor jacket on the 'Macdonald' viola publicity video, also works as an instrument dealer. "It isn't a secret that the fine musical instrument market has seen an uptick in prices," he says. "In the past decade, tangible assets have appreciated because of global fiscal dynamics — inflationary risk, overvalued equities, et cetera — and have made fine musical instruments a stable asset class in and of itself." Carpenter and his siblings made a bid for the 'Macdonald' Strad in 2013 for \$22 million, which the Schidlof family declined.

Simon Morris, co-owner of J&A Beare in London and the dealer responsible for selling the 'Vieuxtemps' Guarneri, explains further: "An instrument can be bought in any currency and sold in any currency," he says, "so it's a good hedge against the market shifts with other investments or government bonds where you're stuck in one currency."

People who buy instruments often consider art as well. Rates of return aside, having a stack of stocks on the sideboard doesn't have quite the same impact on guests as a wall full of Picasso or Richter. Or at least it didn't. The



**1,116**

**The number of string instruments Stradivari crafted during his lifetime (1644–1737)**

**540** violins

**50** cellos [and]

**12** violas survive today

BONHAMS/BRIDGEMAN IMAGES

TYRONE SIU/REUTERS/CORBIS



Wall of sound. Violins on display as part of the 2009 Music Room Auction at Bonhams of London

art market is vulnerable to the whims of fashion, and these days, the art game is all bedazzled skulls and outsized balloon animals.

But fine instruments have been in fashion since they were first commissioned. “Legitimate art has never gone down in price,” says Heinel, “even in times of trouble.” The three Ds — death, divorce and desperation — affect availability of pieces, but “even if families get in trouble and dump their instrument for pennies on the dollar, it doesn’t mean the market has gone down.”

All this talk of hedging and asset classes reinforces the notion that the world’s supply of fine instruments is controlled by a cabal of rich schoolboys playing got it—got it—need it. *The Atlantic Monthly*, in an 1879 piece deliciously disdainful of collectors in general, reserves a special excoriation for those that choose to buy up instruments “and let them lie in their cases in shameful inaction. The violin collector rises to the sublime height of distinct immorality and is not a fit subject of anything short of unsparring execration.”

Morris sighs with exasperation when I put this theory to him. A cellist for ten years with the Academy of St Martin in the Fields before becoming a dealer, he is sympathetic to the functional essence of an instrument. As it turns out, so are his clients. “If there’s one thing I could disavow people of, it’s the notion that investors buy instruments just to keep them in the cupboard.”

Heinel has had much the same experience in Toronto. “[Instrument buying] generally starts with a philanthropic notion. In my forty-plus years, we’ve managed to convince several owners to keep their instruments in circulation. The days of hiding instruments away are gone, really.”

Though much more open than in previous years, the fine-instrument market still has an old-world appreciation for merits of discretion. As such, it’s difficult to determine what type of person an average investor might be, aside from rich and male. Morris declines to fill in the sketch, but does say that, “I can’t think of a single buyer we’ve had that doesn’t have a friend of the family

**‘IT’S NOT THAT THESE HIGH-PRICED INSTRUMENTS AREN’T GREAT. THEY CLEARLY ARE. IT’S JUST THAT THE PRICE TAG ATTACHED TO THEM IS NOT IN ANY WAY A GOOD INDICATION OF HOW GOOD AN INSTRUMENT IT IS.’**

that plays an instrument or wants to make an investment and have a connection with a musician. There can be a wonderful mutually beneficial relationship between a sponsor and a musician.”

ending a fine instrument to a precocious young player is standard practice, though one that some teachers worry is like teaching someone to drive in a Bugatti. The owner gets the satisfaction of seeing his instrument be the star — smaller concert series often advertise the presence of the instrument as much as the player it’s attached to — and the player gets to take advantage of the imprimatur playing that such an instrument bestows. Since the loans are on short fixed terms or a one-year rolling contract, the instrument can always be reassigned if the anticipated career doesn’t quite materialize.

American violinist Caroline Goulding got her first brand-name instrument at fourteen. Now twenty three and working as a soloist with the world’s major orchestras, Goulding plays a Strad loaned to her by the London banker Jonathan Moulds, the former president

of the Europe, Middle East, Africa division of Bank of America Merrill Lynch and a violin scholarship-holder at Cambridge. Moulds has been collecting instruments since the mid-nineties and has loaned some of his other violins to Nicola Benedetti, Giovanni Guzzo and Chad Hoopes.

How much of a factor was playing on a top instrument from a young age in helping Goulding advance to the top ranks? It’s one in a series of questions with no good answer she gamely considers in the twenty minutes before her next rehearsal. “Perhaps it was at one point, but I choose not to pay attention to it too much,” she says. “I do put in my bio that I play the 1720 ‘General Kyd’ Stradivarius because it is a work of art, and to ignore that wouldn’t be fair. But it’s not as though I try to scream it out loud. There are so many people who aren’t playing these instruments and they are fantastic musicians.”

Violinist Jascha Heifetz famously insisted that the beautiful sound he made had nothing whatsoever to do with his fiddle and students the world over know their teachers sound just as good when demonstrating on student instruments as they do on their own. Goulding continues, “These instruments do help the player understand themselves and the subtleties of playing an

**\$3.6m**

**The 1697 ‘Molitor’ Stradivarius, once rumored to have belonged to Napoleon (it did belong to a general in his army, Count Gabriel Jean Joseph Molitor), sold in 2010 at Tarisio Auctions to violinist Anne Akiko Meyers for \$3,600,000, a then world record.**



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JACQUES-LOUIS DAVID, MOLINA VISUALS



# 18

**The number of missing Stradivarius violins listed by The Art Loss Register, including two stolen in New York.**

**Joshua Bell's violin — 'The Gibson' — has a rich provenance: It was stolen twice in its history.**

instrument, but to say that you have to have one to have a solo career is definitely false.”

Lara St. John, a Canadian violinist, was also a precocious young player and now at forty-three has settled into a long-term relationship with her loan fiddle. “Having been lucky enough to play on the 1779 ‘Salabue’ Guadagnini for some fifteen years now, I’d say the advantages to having such an instrument go beyond the magnificent sound. It’s kind of like carrying around a priceless two-hundred-thirty-year-old piece of art, which talks and responds to you, and you get to show it off and make it heard around the world. Pretty neat line of work, if you ask me.” As a paid-up member of the fine-instrument club, would she mortgage everything to acquire an equivalent should her instrument no longer be available? “I’m really lucky to have the violin I do, but if I didn’t have it, I’d certainly buy a modern one. I don’t really get the whole ‘buy me an expensive violin’ thing that folks do.”

While new instruments of exceptional quality are produced every year, the rate of manufacture can’t keep up with the higher number of players competing for top instruments. “A big driver in the market is musicians who feel pressure to own something,” says Morris. “If you get to the New York Philharmonic, you can’t play on a five-thousand-dollar violin. It’s not going to work, so you will simply hammer on doors until somebody buys you one or will lend you the money to buy one. With art, it’s all about want, [but] violins are about need.”

**W**ant is binary and therefore easy to quantify. Need is a little more slippery. For the sake of argument, let’s agree that it is worth soloists splashing out for brand-name instruments because their career depends on their sound. What happens, though, when we look at orchestral string players? They far outnumber soloists — in even the sparest Mozart, it’s ten-to-one — but their job is to blend in. Even if it seems reasonable that the concertmaster would have a top instrument, how does the argument change in the seconds, cellos or — gasp — violas?

Though their role in determining if a chord is major or minor is undeniably important, violas are, by a fair margin, the least sensitive of the string instruments to the lure of the Strad et cetera. Save your jokes. In this century, the viola has shed much of its third-fiddle stigma. The problem is that there are heaps of extremely fine players demanding ever-finer old instruments and there just aren’t very many old instruments available. Only one and a half percent of the remaining Stradivarii are violas and most of those aren’t in playable shape.

Violists, particularly younger ones, are more open to trying instruments from modern makers than are their violin and cello colleagues out of sheer necessity. The Philharmonia, Esa-Pekka Salonen’s band, is easily London’s best orchestra and has, largely because of its punishing travel schedule and freelance structure, an average player age of thirty-three.

Nicholas Bootiman has been a violist in the orchestra

for six years. “I think they are just not even bothering [with old instruments],” he said, when asked what sort of instruments his colleagues buy. “People just don’t want to accept that something which has always been seen as incredible actually isn’t as incredible as they thought. It’s kind of frustrating. It’s not that these high-priced instruments aren’t great. They clearly are. It’s just that the price tag attached to them is not in any way a good indication of how good an instrument it is.”

It’s a different story in Chicago, where America’s long history of European cultural hegemony, generous salaries and stable jobs has created what some view as the optimum institutional culture. The CSO owns several fine instruments outright and also co-signs bank loans for players. “Look, for [conductor Riccardo] Muti’s concerts you always want to play fine instruments,” says longtime assistant principal violist Li-Kuo Chang. “In 1988, when I

entered the orchestra, there was invisible pressure in a way, you know? You feel you should have a good instrument. I remember I had a Fontanini in the mid-nineties. The bottom-line instrument here was a Gagliano. We have several Guadagnini... a few of the front players had Strads from the orchestra. Our concerts are often taped and later on released as a recording and so people are proud of using their instruments.”

If Chang seems more idealistic than Bootiman, he can afford to be. The average salary for a CSO player in 2013 was \$173,000, more than twice what his London colleagues can reasonably expect to make. When the cost of living is factored in, the gap yawns even wider. Some of Bootiman’s older colleagues do own fine French or Italian instruments, but they rarely play them in concerts. Most London orchestras are freelance and players must make their own pension and supplementary health care arrangements.

**The ‘Lady Blunt’ violin is named after its first known owner, Lady Anne Blunt, daughter of Ada Lovelace, granddaughter of Lord Byron.**

**The violin fetched a then-record £84,000 when it was auctioned at Sotheby’s in 1971. Back on the auction block in 2011 to raise money for disaster relief in Japan, the violin was sold for £9.8m (\$15.9m)**

**a modest...**

# 11,500%

**return on investment.**



CHRIS LEE

WIKI COMMONS



**Give it a spin.** Andrew Ling, principal violist of Hong Kong Philharmonic Orchestra, plays the 'Macdonald' viola made by Italian artisan Stradivari, at Sotheby's gallery in Hong Kong

In this scenario, the instruments are the world's most elegantly carved nest egg.

Chang estimates the value of all the instruments in his twelve-person section at a little more than five million dollars. In London, Bootiman's best guess is somewhere around \$400,000. Pro-rated to the Chicago section size, the London figure is approximately one tenth of their American colleagues. Put another way, an average-salaried Chicago violist could buy the whole of the Philharmonia viola section with less than two-and-a-half year's worth of salary. The reverse would take sixty years. In both orchestras, the first three chairs account for about sixty percent of the total section value.

I ask Chang if any of his colleagues play modern instruments. "One third are old, like mine. One third are middle-range like Carcassi or Gagliano and the rest late-nineteenth or early-twentieth century," he says. "I think very few people actually play something after 1940. I mean, everyone has several instruments, but for the main instrument I cannot

think of any modern ones." In London, Bootiman estimates forty percent modern, twenty percent old and the rest "in the middle somewhere." And by modern, Bootiman means modern. His viola was bought new in 1998.

**A**s the market matures and prices go up, instruments are becoming attractive to investors outside of Europe and North America. Morris reports that his company does far more business in Australasia and the Far East than they did twenty-five years ago, particularly in Korea. "China hasn't really happened yet, but it's well on its way to becoming a major market force." At the moment, seventy percent of the world's new violins are made in China. Most of these are intended for the low and middle sections of the market, and so don't impact prices at the top end. What will have an effect is the number of Chinese players who have parents wealthy and motivated enough to buy expensive instruments. Though there are new instruments of

## 'WHEN I ENTERED THE ORCHESTRA, THERE WAS INVISIBLE PRESSURE... YOU FEEL YOU SHOULD HAVE A GOOD INSTRUMENT.'

very fine quality produced every year, there are not enough to keep making the fine instrument category essentially a closed market. When supply is fixed, demand drives the prices even higher. No tiger mother worth her stripes will have her child switch to the tuba just because it's cheaper.

Contrary to all the punchlines, it is the viola that will save the day. Because of its acoustic peculiarities, building a top viola has always required more research and innovation than a violin or cello. Longer bodies, carbon fiber backs to save weight, cutaways for easier shifting, double bouts, melted Dali-esque shapes — just about anything you can think of has been tried. Violists have let go of the Strad myth long ago and have come out the other side with the glass half full. "So many experiments have been done in the last twenty or thirty years with shapes," says Bootiman. "The research that's been done into what kind of dimensions create the best sonority means that the best modern violas...are better than pretty well any of the old ones I've come across."

Change is even more widespread in the bow market, where finding a quality pernambuco bow is becoming increasingly problematic. Even players who only own one instrument will have two or three bows, taxing the available supply even more heavily. Again, necessity forces change. Carbon fiber bows, which are often better quality and considerably cheaper than their wooden counterparts, have already infiltrated many of the major orchestras. Not that any of the players would thank you for the rumble.

As long as there are Strads, Guarneris and another old violins in good working order, musicians and those who love them will still be valued. And even if the existing, playable instruments degrade to the point where they can't be on stage, there will always be collectors relieved to have *The Atlantic's* permission to keep them in a cupboard. Three hundred years of reverence is a hard tide to turn, but as modern violas and carbon fiber bows become more socially acceptable in orchestras, so too will modern violins and cellos. In fifty years, it may be as normal to see a sea of graphite in front of the brass as it is for the players to wear straight ties.

What of the 'Macdonald' viola? At press time, it remains unsold. Two of the bids exceeded thirty million dollars but that was still fifteen million short of the reserve. "There are maybe two or three collectors in the world who would consider purchasing this viola," says Carpenter, a fact that makes the existence of the massive publicity campaign even more puzzling. Sotheby's was clearly hoping to attract

a buyer that was looking to complete a quartet. There are a few others in existence, but buyers are shrewd as well. This time around, completing the set wasn't as attractive as the Schidlof family hoped. "The family is sticking with their number, and as crazy as it sounds," Carpenter says, "the viola will eventually sell for the asking price."

Chang is twenty-five years into his CSO gig and for most of that time has played on a Guadagnini now worth more than a million dollars. Bootiman bought his viola when he started college and fifteen years later, it's now worth triple the original price. Though he is still happy with his instrument, Bootiman has lately been seduced by a Peter Greiner viola. "It's the most responsive and most beautiful viola I've played," he says, his good-natured realism drifting ever so slightly into reverie. Greiner's instruments are highly sought after and played by the likes of Kim Kashkashian and Christian Tetzlaff. In June last year, his first instrument to come to auction sold for \$69,000, about half of the auction record for a living maker.

Back in London, Bootiman is still waxing poetic. "I had no idea what it was about it that made it so resonant. It had an incredibly deep clarity and the strings responded immediately. On top of that, everything was so easy. There is a silvery sheen and a sort of electricity in the sound..."

*The spell was ended. So powerfully was I wrought upon by the last vision I had seen, that the moment my limbs resumed their freedom, I rushed forward and fell fainting. When I recovered consciousness, I found Luigi bending over me, and sponging my face with cold water. He was pale and agitated, and seemed scarcely able to stand.*

*I turned inquiringly, and seeing on the carpet a mass of small splinters of wood, mixed with tangled strings and pegs, knew what he meant. This, then, was the end of the masterpiece of Stradivarius.*

*'I was simply an instrument,' he said. 'Indeed it seemed the whole time not I, but another was playing. But here is an end of it.'*

*Then, late as the hour was, we kindled a small fire, and consumed every atom of the violin, which held, in some mysterious, inexplicable way, the story of man's love and death. ■*