

## Everything's Looking Up in Kansas City: An Interview with Anton Krutz

At the end of our correspondence I asked Anton Krutz if he had any philosophical thoughts he would like to express. His response was, "Long ago in Europe, there were fundamental changes to long-established ecosystems that coalesced to result in the dark ages. When the first bowed string instruments started being played in Europe, their sound caused such a paradigm shift in peoples' creativity and thinking that the sound became the catalyst that pulled the continent out of the dark ages and into the renaissance. In essence, bowed strings sound was a catalyst for solving problems at a higher level of consciousness than was used to create the problems.

In the modern world we also have many fundamental changes to long-established ecosystems that are starting to coalesce. The only solution is for society to again solve problems at a higher level of consciousness than was used to create the problems. I think just like before, bowed strings is the catalyst to stimulate creativity to think differently."

Anton Krutz (pronounced "Kroots") is a master luthier who is also owner/partner with his father Misha of their three companies, KC Strings, St. Louis Strings and KRUTZ Strings. Anton's effervescent, go for it positive approach has enhanced his natural creativity. Anton is a master luthier who simply loves to make things that work. Be it in business or making fine instruments. Anton is always in motion and the only living luthier that I know who has made two complete sets of basses for the bass sections of two symphony orchestras. Through several conversations and e-mails I made some discoveries and got some interesting insights into Anton's thoughts, actions and philosophies.

**David Gage:** Where were you born?

**Anton Krutz:** I was born in Leningrad Russia. It is now St. Petersburg. Both my parents were classical musicians. My father was a bass player and had graduated from the Leningrad conservatory of music. He played in the bass section of the Kirov Theatre. We immigrated to the U.S. in 1976, then moved to Kansas City in 1978 when my father got the position of principal bass in what was at that time the K.C. Philharmonic.

**DG:** At the beginning in KC Strings you were working with your father. Are you two still working together?

**AK:** Yes. He is living full time near Beijing to ensure the quality of our KRUTZ student instruments and that they continue to be made to our specs. We're really picky about quality of instruments that we sell.

**DG:** You emigrated from the then Soviet Union. How did that come about? Was it difficult to leave? What was the Soviet view of people leaving?

**AK:** I really don't want to get into the politics of it, but it was very dangerous to even apply to leave the Soviet Union. There could have been some retribution. His friends told him to be careful. There was some kind of *detente* then, and because my father was a musician he was able to leave. If he were an engineer he would not have been allowed. So my father was very brave to do that.

**DG:** Did you study instrument making in a school? Where? Why did you start doing that? How was the school experience?

**AK:** I was building model cars and airplanes from the time I was 8 years old. At age 12, I started apprenticing to a local Kansas City Luthier named Earsel Atchley. I enjoyed making and repairing string instruments so much that I decided to make it a career. So after graduating from high school I went to the Violin Making School of America in Salt Lake City, Utah. Videos of both those experiences are on our KRUTZ Strings YouTube channel 'History' playlist. Going to violin making school was a blast. I made instruments all day. Then hiked and biked in the spring and summer and skied in the fall and winter. What's not to love!

**DG:** I understand that the Salt Lake City school was fun and perfect for someone who is young and loves the outdoors but what about the actual training, can you speak to that?

**AK:** Training was great. You learn how to use tools and get a very solid foundation for the 'instrument making process'. But in order to make a real instrument with a soul takes many, many more years of experimentation and learning.

But what I realized soon after leaving school is that you don't learn to make a great instrument in school. You learn the skill sets to work with wood and varnish to make a good student instrument. But the separation

between making a student instrument and a professional instrument is huge. To fill that knowledge and experience gap took many more years. That is why I think the violin making field is so secretive. Once you spend so much time gathering the unique knowledge and experience, you will not readily share it.

**DG:** Your theory about why makers are so secretive about their process is interesting. But I have noticed that American bass makers tend to be very open about their techniques. Do you agree?

**AK:** I think the conversations between makers are very warm and have helpful informational exchanges at a general level. That's because 99% of the work, technique and experience is already similar. Instrument making after all has been around for several centuries. That said, this same information does sound new and open to non-luthiers. But the 1% that truly differentiate the instrument in its creation is proprietary.

**DG:** Have you heard about the Build a Bass in a Week program at the ISB Conventions?

**AK:** Yes. Sounds like a lot of fun.

**DG:** Do you or did you play an instrument?

**AK:** I played the violin and viola growing up. As I got into making instruments I learned to play a few notes on the cello and bass as well.

**DG:** Do you have a preference in what instrument you make?

**AK:** I always get asked which instrument I like to make more. My answer is the one that players buy. In the end that's what it's all about. Players falling in love with the instrument and then using it. So it is all about random timing of what type of player is looking for an instrument.

**DG:** Why and when did you start focusing more on string bass?

**AK:** I started making basses right along with all my other instruments. This is because my father was a bass player and we worked through the ideal model and acoustic aspects together. Since then, the basses I made have been some of my more popular instruments. In fact I have two major symphonies who purchased a set of my basses for their entire bass section to play on; The Moscow State Symphony Orchestra and the Kaohsiung Symphony Orchestra. A luthier has not made instruments for a whole section of players since the time of Stradivari. And with him it was only for chamber orchestras because symphony orchestras did not exist yet.

**DG:** When you made the two whole orchestral bass sections of basses, did you make them all the same? Same graduations for each bass?

**AK:** It took several years to make basses for each symphony. I use Golden Section Geometry for my graduations so the sound is consistent between the instruments. Also, the ground and varnish have the greatest effect on the sound, and that is consistent as well. So the time spacing between the bass-making does not affect the acoustic blend.



Nine of Anton's basses that he made for the Moscow State Symphony Orchestra, one of two Russian orchestras for which he made basses for the entire bass section. (All photos provided by the author.)

**DG:** According to Michael Greenberg, Gand and Bernadel Frères supplied a complete bass section to the Paris Opera in 1874, and another set of basses for the official concerts of the 1878 Universal Exhibition in Paris (the so-called 'Trocadéro' instruments, named after the concert venue). So you are still one of the few over the last couple of centuries!

**AK:** Yes and those were not modern orchestras. The modern orchestra did not start until the early 1900's.

**DG:** Would you please describe how your commissions for two whole bass sections came about?

**AK:** Both commissions came from the players in the symphonies, who were playing my instruments that were owned by other bass players they knew at some point before. So when the conversation came up about ordering modern basses my name was at the top of the list.

**DG:** Please explain Golden Section Geometry.

**AK:** Many of the fundamental core aspects of the violin model, from the proportions to the spirals, were based on Golden Section Geometry or as it is sometimes called the Divine Proportion. This is an important point because Leonardo [DaVinci] was the pioneer in the use of Golden Section Geometry throughout divergent fields. Golden Section Geometry was so fundamental to the new violin model that Andrea Amati and then Stradivari perfected the violin model into the modern version we recognize today with even more use of Golden Section Geometry... Since the use of Golden Section is already known in its use within the model shape, I have laid out how Stradivari started using it in his arches. I go into some of those aspects on my site at: [www.KrutzStrings.com/geometry](http://www.KrutzStrings.com/geometry). I then go further and use Golden Section Geometry for my entire plate graduation framework. All the proper tuning of the plates aligns with that type of graduation.

**DG:** So Golden Section Geometry, or the Golden Ratio, simply stated, is the mathematical description of some things that naturally occur in our world? For example, if you divide a line into two unequal sections it works out that the whole length divided by the long part is equal to the long part divided by the short part, defining an aspect of the Golden ratio.

**AK:** That's right. In sound and throughout nature.

**DG:** Where do you get your woods?

**AK:** [The] bass wood comes from Canada.

**DG:** Have you made basses out of wood other than spruce and maple?

**AK:** [I] always used maple. But I did make one bass top out of cedar. It was so light and the bass sounded fantastic. But it split so easy I was afraid that it would not hold up long term and would crack.

But I have a ground that solidifies the wood and it has held up good so far.

**DG:** Are most of your varnishes oil or spirit?



Planing down across the grain of the neck block in the mold.



Scraping the back arching.

**AK:** The ground is a process no one else in the world does. The varnish is oil.

**DG:** Oil varnish. What is your opinion, in this case the difference between oil and spirit varnish? Do you use a light box for the basses? Another way of asking: Why do you use oil varnish?

**AK:** Only oil varnish can be used to attain a professional instrument look. We don't only have a light box to dry the varnish but we have a UV room to fit a couple of basses, cellos and violins.

I see an instrument as if it were like a human person. It has a belly, back, ribs and a head. So the white body is like the skeleton. The ground is like the skin. The varnish is like the clothes; so you can put human skeletons side by side and not be able to differentiate between them. This is the same for putting white instruments side by side.

But once you have skin on the skeleton then the human has an individual visual differentiation. Also, the health of the skin dictates the health of the human. This is the same for the instrument ground, which gives the instrument individual differentiation. And also like the human the ground dictates the health of the instrument's sound.

The clothes on the human also help visual differentiation. But if the clothes are too tight then they restrict



**A proud Anton with a newly completed Krutz bass.**

movement. This is the same for the instrument varnish for visual differentiation. Also if the varnish is too hard then it restricts the movement of the plates. So beside oil varnish having a professional look the spirit varnish is too hard and restricts the movement of the plates, while the oil varnish does not.

**DG:** When and how did you develop the metaphor of the human body and the violin body having similarities or some relationship between the two?

**AK:** When I realized the difference between Italian instrument sound and all other instruments' sound was that the Italian instruments had a voice quality.

**DG:** What would you say are the biggest changes in the string instrument making business over the last 20 years?

**AK:** Hands down, it is the elevation of instrument making quality in China.

**DG:** Do you find it difficult to find good young luthiers to hire?

**AK:** My business has been very fortunate in having all luthiers seek us out. And other craftsmen also came to us that we then trained.

**DG:** As a full disclosure I should add that you worked at our shop in New York for a couple of years in the 1990's. Besides it probably being the most incredible couple of years of your life, are there any particular memories that stand out?

**AK:** It totally was the most incredible couple of years of my life! I was 22 years old and had learned so much from you and all the guys there. Memories that stuck:

Since I had many years of violin (includes viola and cello) restoration experience, your shop was my first experience with bass restoration. The approach to bass restoration was very different. Also it was ten times more exhausting because it is done standing up. (All violin restoration is done sitting.) I remember coming home the first couple weeks and every day, after eating, just dropping into bed and not getting up until morning. (Just so I don't sound like a complete wimp, I do want to say I had a 1.5 hour commute walking to/from and standing on subway each way.)

Memories that stuck out on clients: When players came in with basses you would take me with you so I could listen while you talked to them about what happened to the bass. The stories of how basses get damaged in New York are so completely unique. They just can't happen anywhere else

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in the world. If I did not personally hear them I honestly would not believe they happened. (There's a book of stories there for you to write, Dave.) One story was so funny that I couldn't help myself and starting softly snickering. That's when you kicked me in the shins to shut me up, while still smoothly talking, in very somber conversation about the bass with the player.

**DG:** I know that having just graduated from the Salt Lake City Violin Making School of America, we learned several things from your experiences there, in particular regarding varnishing. Do you remember that Prescott bass on which you antiqued and matched the varnish of a scroll graft?

**AK:** Yes, I do remember doing a full restoration on that Prescott bass! The winding/head on the scroll was completely butchered. So we agreed that I would carve a completely new winding/head. So I cut off the old one, glued on a matching piece of wood and carved a new winding/head. Then I varnished it to match the Prescott varnish Kurtz. It turned out great.

**DG:** Mike Weatherly and I were remembering your irreverence for the preciousness of dedicated luthier tools. Your point was that any tool you use on an instrument is a luthier tool. You had a can do, no problem attitude that I think has served you well.

Do you do scroll grafts all by hand tools or do you use machines such as a milling machine? What is your philosophy on hand vs. machine work on instruments?

**AK:** Centuries ago the successful master artists/craftsmen had many apprentices doing the rough/grunt work. If you were good at what you did and your work was in demand then you had apprentices that helped you. So in the modern world we have machines instead to do some of the rough/grunt work. Which is great. Because as long as all machined work is done in the vision of the craftsman, then that work is simply an extension of the craftsman. And if you are good at what you do, and have demand for your work, then you have machines that help you.

**DG:** At the beginning in KC Strings you were working with your father. Are you two still working together?

**AK:** Yes. He is living full time near Beijing to ensure the quality of our KRUTZ student instruments and that they continue to be made to our specs. We're really picky about quality of instruments that we sell. My father and I are owner/partners.

**DG:** Interesting, what are all of your companies?

**AK:** St. Louis Strings, [www.stlstrings.com](http://www.stlstrings.com) , KRUTZ Strings, [www.KrutzStrings.com](http://www.KrutzStrings.com)

**DG:** Would you please tell me what each company does independent of the other? In short: why 3 companies?

**AK:** It all started with us crafting top line professional instruments. That brought in professionals who then wanted restorations on their instruments. Then their students and other teachers and their students started coming to us. It was only at that point that I realized I was 'in business.' Up to that point I just thought we were running a boutique craft shop. So that led us to open K.C. Strings, a retail full-service violin / bass shop. We later expanded into opening a shop in St. Louis because we had so many clients there. Then we formally launched KRUTZ Inc., and separated out the instrument crafting from the retail shops.

**DG:** Would you please describe the function or differences between the three companies?

**AK:** K.C. Strings and St. Louis Strings are both [brick and mortar] retail full-service violin, viola, cello and bass strings shops. We have Google tour videos for both on the web sites. KRUTZ Strings crafts advanced student to professional instruments in our Kansas City workshop. KRUTZ also imports a student line of instruments. All the set-up on them is still done in the Kansas City workshop. All the instruments are sold to nearly 300 dealers around the U.S. K.C. Strings happens to be the flagship store for KRUTZ instruments.

**DG:** How many "in the office" as compared to how many in the shop? Does everyone work on everything or do you delineate some different workers for each of the three businesses?

**AK:** The retail shops have 2/3 of the staff on the sales and office side, with 1/3 being the repair/craftsmen staff. KRUTZ Strings is flipped on those proportions. About 2/3 are the craftsmen and 1/3 is office and sales staff.

**DG:** How many employees do you have?

**AK:** About 40 employees between all my companies.

**DG:** How are you able to balance your product manufacturing with your instrument making?

**AK:** We have a pretty extensive business operation now, and that takes a lot of my time to oversee. Then I have restoration and making as well. So a full plate. Each day just depends on what is more important to work on.



**DG:** You said your three companies make up a full plate, but it sounds like it's more than a full plate. How do you delegate? I know for one your father is in Beijing managing your rental instrument production.

**AK:** I empower our staff to make the decisions to always serve the clients to the best of the shops' ability. We have a culture of 'Responsible Autonomy.'

**DG:** It seems that your string instrument rental program is doing well. Would you give me a rundown of how it works? I think you have basically two levels of rentals?

**AK:** We have a standard student rental price with a standard student level instrument outfit. We can rent upper level instruments for higher monthly rates. We let the clients select the instrument, bow, case/bag they want and we combine it for their step-up rental outfit.

**DG:** How many instruments do you now have on your rental fleet?

**AK:** We have several thousand rentals.

**DG:** Wow! I was in the Bronx at a concert of the Cuban National Symphony last week and the management company said that they mostly use KC Strings for their rentals. I was impressed.

Where do you see the future of instrument making going with the diminishing supply of good traditional string instrument woods available?

**AK:** The current trend is moving to carbon fiber made instruments. This is great for guitars, brass and woodwinds. But not sustainable for bowed string instruments, because the minimum requirement of bowed strings is for them to have a warmth of sound. The best of these master instruments go further and actually emulate a voice. Even though they are basically a wooden box with metal strings. And "a voice" is not just frequencies. A voice requires three divine elements to exist: heat, moisture and air. There is nothing else in the cosmos that requires three elements to exist. That is what makes a voice divine.

So if a wooden box with metal strings can emulate a voice, then by extension that makes it divine as well. That is why the string sound is always used in movie soundtracks and every commercial that requires an emotional impact. Bowed string instruments, more than any other man-made product, have the greatest capacity and potential to affect emotion. They have done so for centuries before and will continue to have the greatest affect for centuries to come. I have a video called *Stimulating Creativity* on my own



**Anton with one of his latest basses at his booth in the 2018 NAMM show in Anaheim, California.**

brand site of [www.AntonKrutz.com](http://www.AntonKrutz.com) about these concepts for those interested.

This long explanation leads to the answer on the future of bowed string instrument materials. Which is that you cannot replace wood for a bowed string instrument. Once you lose the warmth and potential voice quality, then future technology will be able to match the inferior acoustical output. Therefore the future for student instruments is found in the advancement of reinforced wood pulp, cellulose composite mixtures and especially cellulose nanocrystals in use with injection molds. This future product can provide a basis for traditional ground and varnish that would be applied to them and in turn produce the warmth quality of sound required.