

Is a varnished string
a good idea?



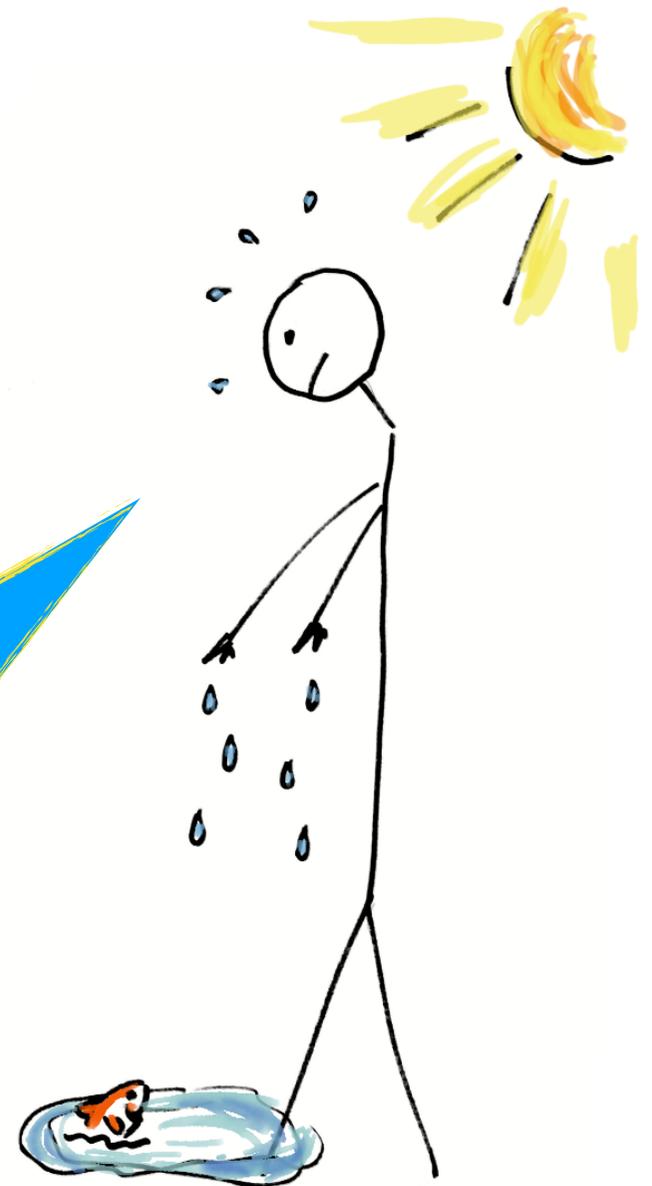
- the Problem:

I play in humid environments and my strings don't keep the tuning

I have sweating hands, and the strings break too often

I need more stability, so I use varnished strings: I know it's a modern solution, but my life is stressful and I often experience extreme conditions, so there's no other way for me.

Without varnished E string I can play maximum one rehearsal and one concert, then it breaks.
So, varnished e strings save my whole professional sweaty life!



*When did this problem appear?



Between 19th and 20th century, (and not before of that) many brands advertise on this problem: strings were packaged with names such as impermeable, the alligator waterproof...

We shall notice that right in those years strings production shifted toward a more industrial production, with the use of big polishing machines which required stiffer strings to be well polished.



Following the requirements of the appealing and fast-growing market of surgery floss and tennis, musical strings became: smoother (standardized polishing to offer commercial gauge), stiffer (to be polished by machine) and weaker (broken fibers are far more sensitive to humidity).

Here comes the desire for an impermeable string!

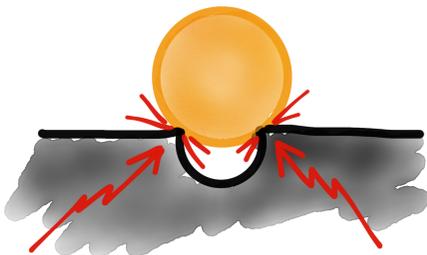


Even varnished strings
break every week, so
unlucky am I to live
with this situation!

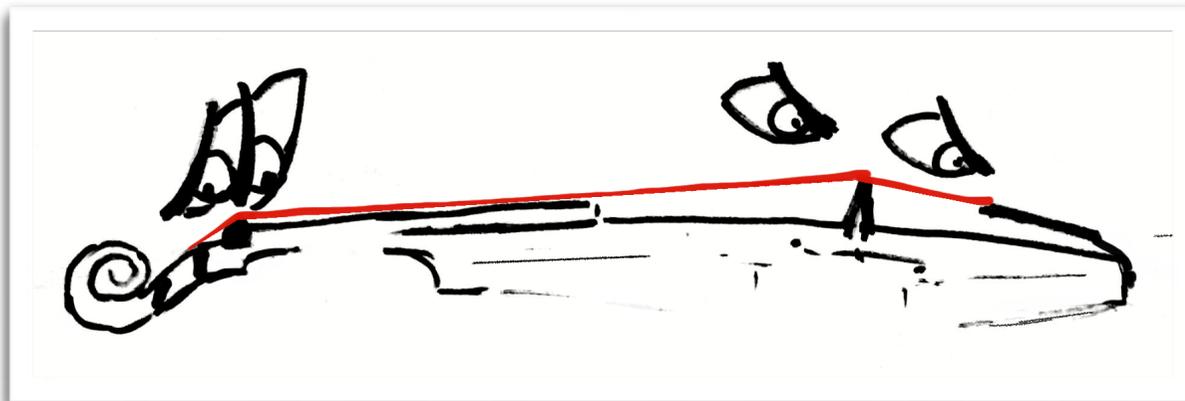
*Did you check for sharp edges?

A tensed string is extremely fragile, especially if stiff and low twisted, and can suffer from sharp edges that we cannot really see or feel at our touch.

So, it's important to watch attently the broken string to understand where it broke, considering that it happened under tension: when we pull it to see where it broke, we are losing part of its length because of the tension we cannot give with our fingers only.



A sharp edge is not only a visible angle but more often is a channel slightly thinner than the string itself, in which the string remains stuck and breaks, or on which edges the string simply wrecks.

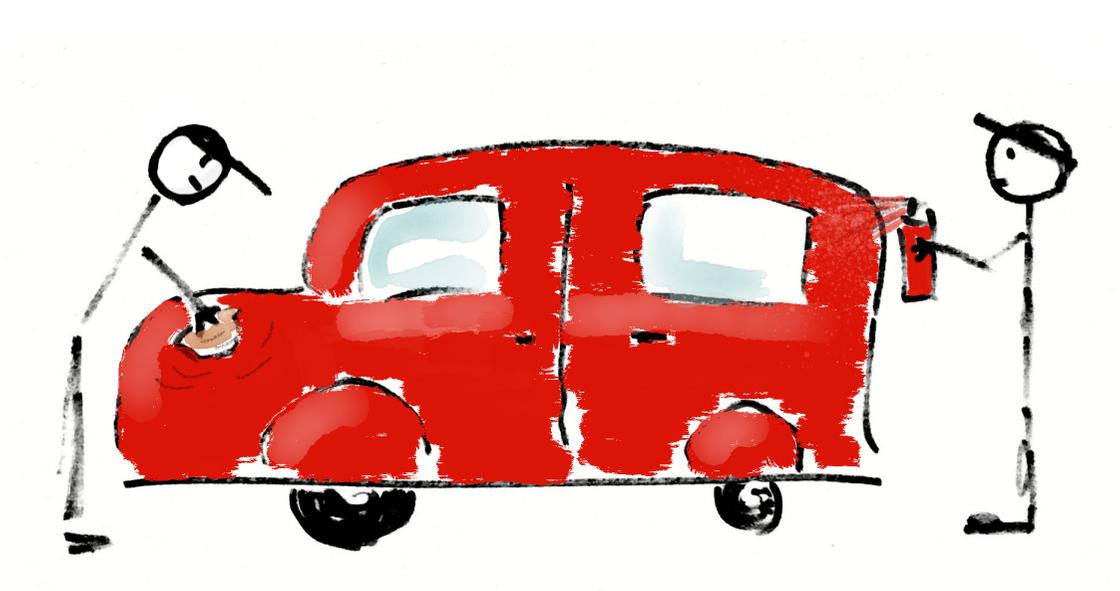


Checklist:

- Peg
- Upper Nut
- Bridge
- Tailpiece

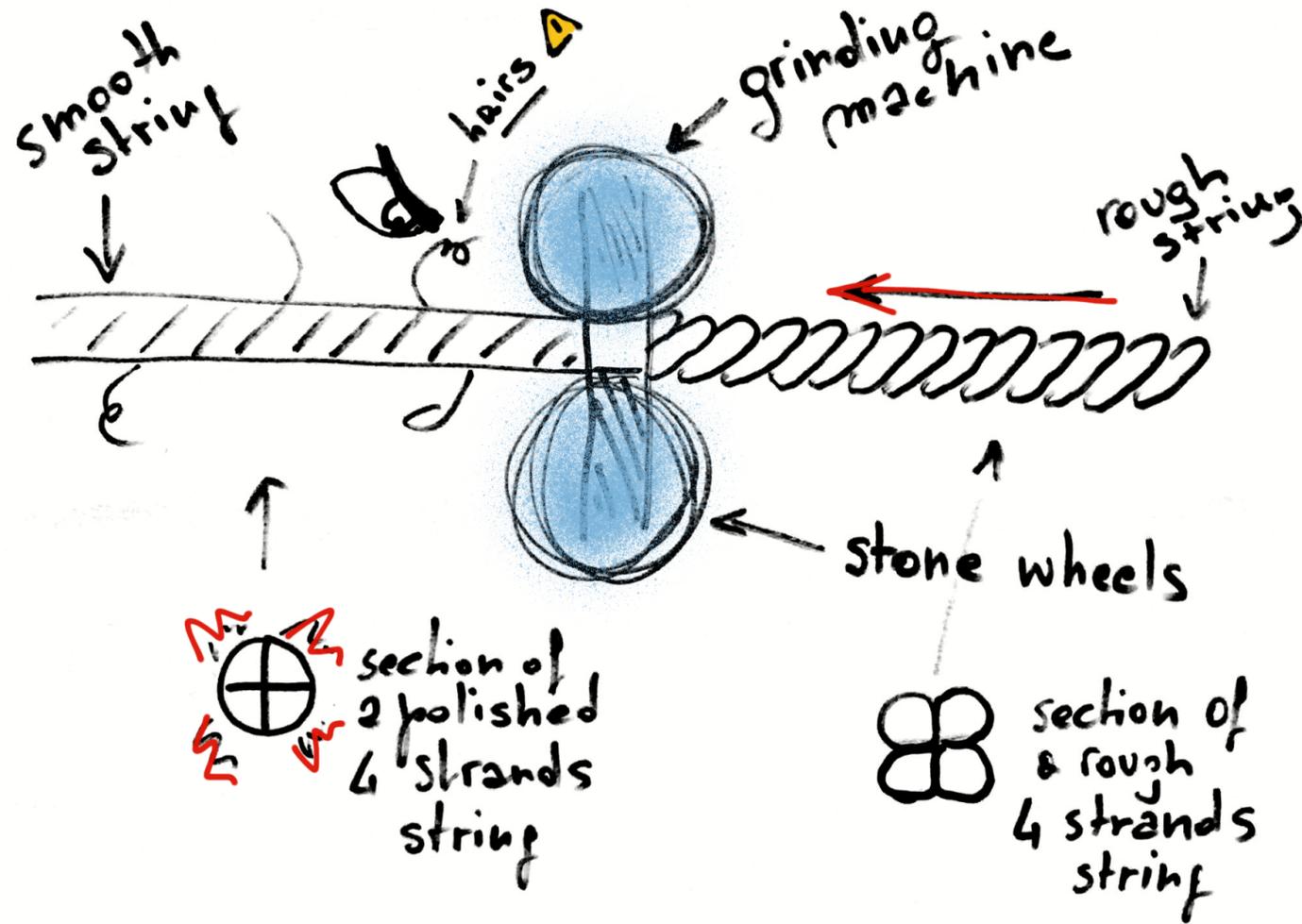
What is a varnished string?

The varnish used is normally a synthetic two-component varnish, very resistant, like those used to varnish cars.



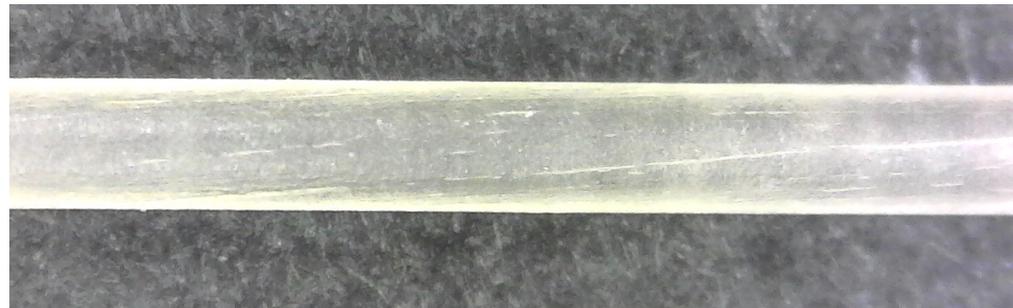
To apply this on a string with good results, avoiding bubbles and imperfections, we need the string to be perfectly smooth.

So, we take a nice medium twist string, robust and nicely sounding, and we polish it until it is very very smooth.



Now, we do have a problem. Each one of our strands of gut has been **weakened** by abrading or cutting it a part of it, actually almost half of it. Broken fibers do not participate in the tension and the vibration, in the sound, but they just stay there, to “weight” on the string, acting like a mute. On top of this, the remaining parts are easily to make **hairs**.

For those familiar with wood working, it’s exactly like hairs popping out of a cut wood. And we treat them in the same way: we apply a glue (which keeps our broken strands together, stiffen the string, and acts as the filler on wood, or, once more, as a mute), the hairs come out, so we can polish the string again, this time obtaining a real smooth surface. On which our varnish will set nicely!



One common way to reduce the hairs problem is to use for varnishing purpose a less twisted string, often treated with allums or other stiffening chemicals to make the polishing process easier.

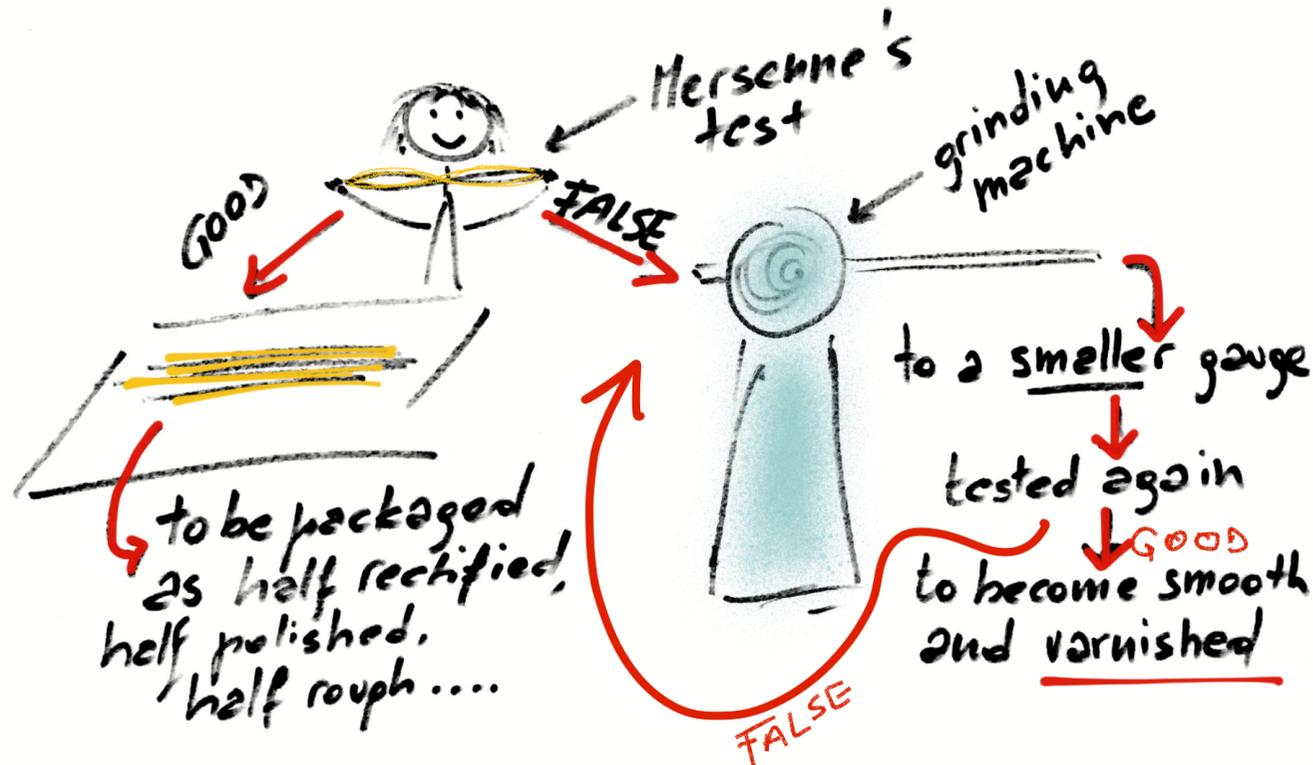
The grinding machine tends to “eat” the strings which are not straight and stiff. They can break between the wheels, or try to go elsewhere and get spoiled. A rigid stiff string it’s easier to handle for the machine and can also be worked completely automatically.

I firmly believe this is why strings became stiffer, smoother and **sold in single packages or in sticks** instead of boundles at the beginning of the 20th century: because polishing machines entered in the process (in Germany and France), mainly because of the need of serving the market of surgical floss (WWI), and a stiff string was easier to manage. Thus, the effective marketing campaign on perfect fifth strings!



“German Strings, as well as all the products of that land, are robust and with a nice price. They are perfectly smooth, stiff at the touch, so much to resemble steel: even their sound is affected from that stiffness”. (Luigi Forino: “Il Violoncello”, Hoepli, 1930) They could have a nice price because they were made in big factories, with big machines, with big polishing machines.

The Conscious Polisher



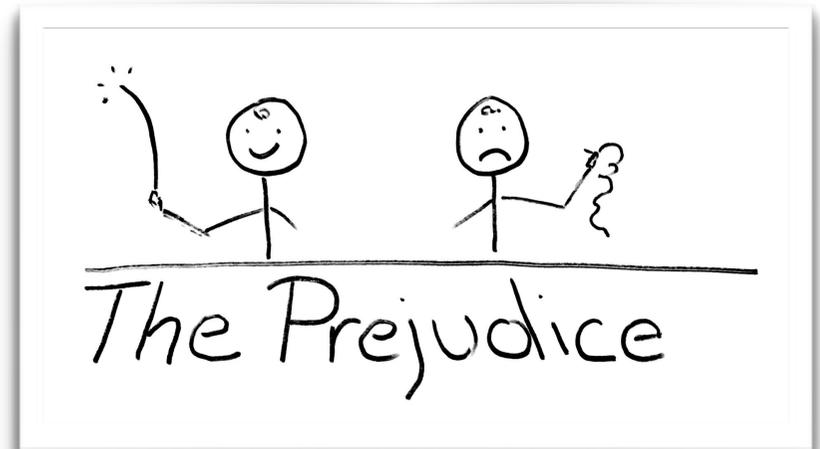
Ps: During the polishing process, the string which becomes smooth is the one which was faulty when tested with Mersenne's test at the previous polishing passages. When finally, after being polished thinner and thinner, it is even and smooth, it is also very weak, so it may be varnished to be sellable.

So yes, varnish makes the string stronger, but it requires a much weaker string to be applied on.

- Why we do like varnished strings at first touch

Most of us come from modern instrument studies, so we tend to feel more confident with a thin, stiff and perfectly smooth string.

We assume that the varnished string is stronger because indeed the varnish makes the string stronger.



*Why do we need a varnished string to be thinner compared to medium twist plain gut ones?

A varnished string is normally less twisted than a plain gut one, and also stiffened with allume or other chemical treatments. This means that it is more rigid. It will stretch less, which is an advantage, and which alone would require us to buy a slightly thinner gauge if we want to end with the same gauge once tensed. Anyway, being more rigid, it requires us to buy a much thinner gauge, because otherwise it will simply feel too tensed under our fingers, moreover it will not react under the bow.

On the opposite, if we want to switch from a varnished low twist to a half polished medium twist, we definitely need to order a bigger gauge.

When you buy a varnished string you are buying into:

Feature	Benefit
A low twisted string,	Less colors, less harmonics Your sound will be more poor and stiff
A smooth string which was weakened by a hard polishing	it could break unpredictably without warning signs It has many broken fibers acting as a mute
A transparent string which is stiffened with chemicals	will not be sensitive to your right hand delicate carving of the note Your sound will be stiff and will lack nuances
A string covered with modern poliuretane varnish	which could be scratchy when you need it to be energetic or whistling when you want to be delicate Not historical
A thinner string (as a big one would be too stiff and rigid)	Less power to your fortissimo and less promptness in your pianissimo
A string which <i>could</i> be false	A smooth string <i>may be</i> the result of many failed mersenne's tests during the polishing process, in other words it <i>could</i> be a string with manufacturing defects. It could break, be false, make noises or unexpected rough sounds
A longer lasting string	if compared to the same polished string without varnish, but I believe it will never last as much as a well done and well prepared string, providing the grooves on all parts of your violin are big enough to accommodate it comfortably.

Better to use steel than such a string!

Is there a better solution than varnish?

YES

There are two alternatives, and they also happen to be historically plausible:



OIL SOAKING or ANIMAL GREASE TREATMENT

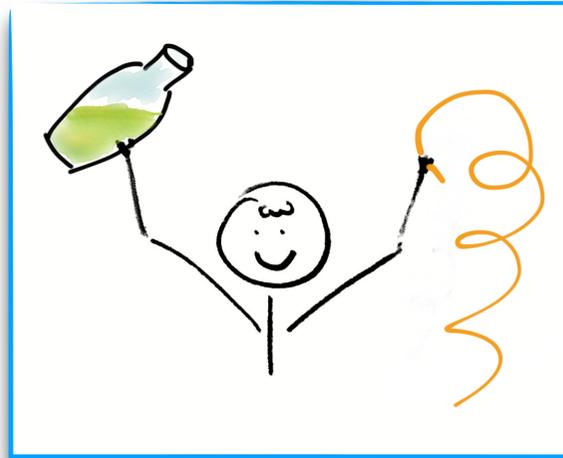
on a good, well twisted, slightly polished and nicely
sounding string

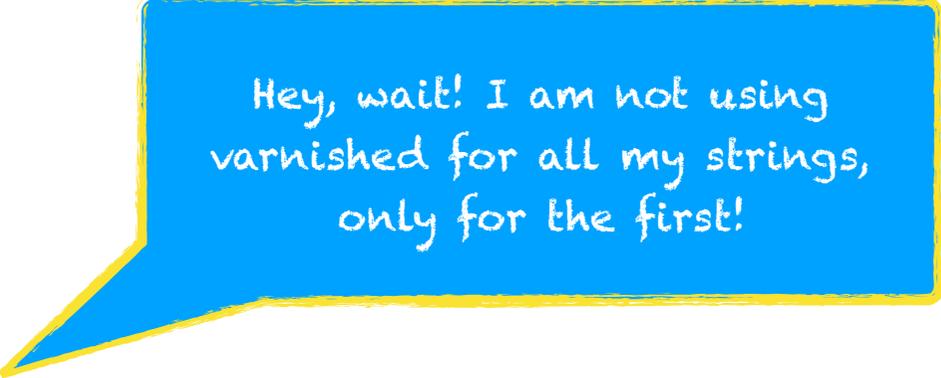
Advantages of oiled or greased strings compared with varnished strings:

- The string is not weakened by excessive polishing so it will not break unpredictably
- As it doesn't have to be perfectly polished it is well twisted, so it will have a full rich sound, very easy to speak and sing with
- The oil or grease will form a strong leather-like surface which will last long before it gets spoiled by hands sweat.
- Thanks to this impermeable surface it will not suffer from humid climate and it will keep its tuning easily.

A longer life of the string means saving money and saving practicing time, as well as avoiding frustration

A more stable string with a richer sound
means playing with joy





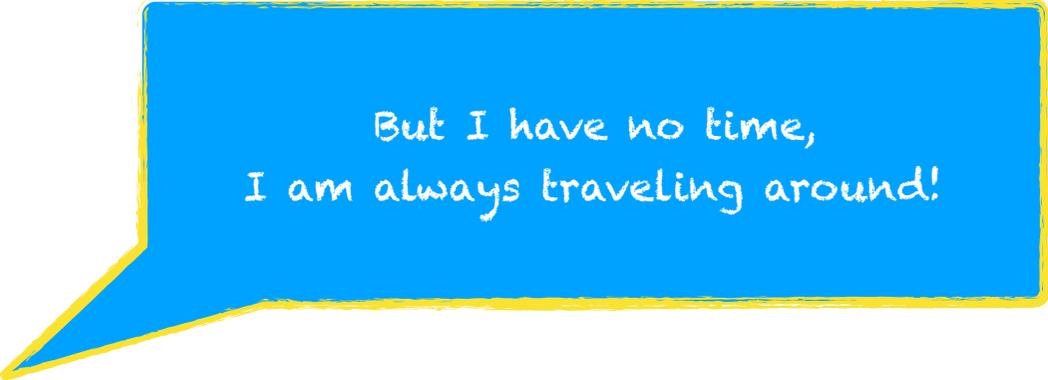
Hey, wait! I am not using
varnished for all my strings,
only for the first!

Why would you have a string so different on one position (and have a tiny sounding first string) when you can have beautiful strings all over, that cause no issues at all?

Strings of different kind, twisting, stiffness, will not stretch equally causing **intonation problems**.

They will also not react the same way under the bow and you will need to pay constant attention to applying the bow differently on each string.

This means paying constant attention to both your left hand and your right hand, avoiding you to play with joy



But I have no time,
I am always traveling around!

It's little effort to get organized and start the process. You already plan on advance buying strings, and you have to do it quite frequently if your strings break a lot, and you need to bring with you many replacements!

Next time you shop for strings, just buy some more and soak some of them into oil, or grease them and forget them for some months. Then, when you need replacements in your case, take them from that treated stock and replace your stock with new strings to be treated, soaked or greased. It's just a matter of starting the process.

Once you get started, you'll be amazed at how much time and stress you will save, because your strings will last longer and your sound will be richer.



Warning: don't soak wound strings!

When you soak a wound string into oil, the core absorbs oil and becomes bigger, stretching the metal winding.

When the core will dry returning to its normal gauge, the loose wire will cause insidious and annoying buzzes and from that point on you will need to keep your strings constantly wet to have the core match the wire.

I don't sell strings, neither I sell oil 😊.
I'd just love people playing with more fulfillment and joy.
And I dislike when we are victims of prejudices or tendentious advertising,
specially when we have natural solutions easy at hand.

Thanks for reading this.
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