

Violins of Nagyvary

At violins, those of Antonio Stradivari and Giuseppe Guarneri (1687?-1745) are the most sought after. Violin makers have been trying to replicate the sound of these violins, but Stradivari and Guarneri violins sound the way they do because their makers took their secrets with them to Italy. Nagyvary, professor of biochemistry at Case Western Reserve University &M, is using a combination of scientific research to solve the puzzle of what makes Stradivari and Guarneri the greatest ever.

"I knew it would be worthwhile studying," he says. "It's one of the greatest problems one can approach. You don't make a bomb with it, and you don't turn around genetics with it, but it affects the lives of millions of people to find out why Italian violins are so special."

If he could solve the problem, violinists who couldn't afford the high price of a Stradivari or Guarneri violin might be able to buy a Nagyvary-made violin that sounded just as good. And future generations would be able to enjoy that sound, he says, because some of the violins that were made 200 years ago are beginning to lose their voice. Even the ones that haven't eventually will if they are played a lot. Finding the secret would enable him to keep the world supplied with top-quality instruments.

Nagyvary's days as a boy listening to violins in Hungary and later as a graduate student listening to the the violins of Stradivari formed the foundation for his research.

"None of the violins in Hungary are any good because they are German-made, generally," he says. "It's amazing, because the Germans are so ingenious in science and technology . . . , but they never made a good violin. That puzzled me."

"Why did every Italian violin maker 200 years ago make good violins and the Germans made 20 million tries and none of them are any good?"

Nagyvary began his research by reading all of the books he could find on violins and by buying pawn shop violins and studying them. He also visited violin makers, but says he slowly learned that the violin-making

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