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152 To Build a Better Violin

Cover: For centuries, violin makers have achieved technical mastery through trial and error, producing some instruments that still sound extraordinary after 200 years. How did they do it? Can science decode the great luthier's secrets? (photo of violins made by Carleen M. Hutchins; image by Edith Munro).

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Science Service, which publishes SCIENCE NEWS, is a nonprofit corporation founded in 1921. It gratefully accepts tax-deductible contributions and bequests to assist its efforts to increase the public understanding of science, with special emphasis on young people. More recently, it has included in its mission increasing scientific literacy among members of underrepresented groups. Through its Youth Programs it administers the International Science and Engineering Fair, the Science Talent Search for the Westinghouse Science Scholarships, and publishes and distributes the *Directory of Student Science Training Programs for Precollege Students*.

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Acupuncture controls unethical

Steven Denenberg's letter about acupuncture controls (Letters, SN: 7/9/94, p.19) demonstrates a common Western misconception about acupuncture.

The paradigm of traditional Chinese medicine is that energy lines carrying "chi" run through our bodies in specific places. Illness is caused by a weakness or blockage of the movement of chi. Simulating the proper points can remove the blockage.

An ethical acupuncturist would no more risk harm by stimulating a healthy point and interfering with the proper flow of chi than a surgeon would intentionally open an incision in a healthy part of the body.

The letter also suggests that the writer has already decided that acupuncture is a hoax, thus points stimulated with needles stuck in at random could not possibly cause ill effects.

Joy D. Fisher Buffalo Grove, Ill.

Big Bang: Big bust?

Someday you'll just have to face it: The Big Bang theory is wrong ("Are gamma-ray bursts standard candles?" SN: 6/18/94, p.397).

Arnold Gulko's vortex theory (1979) explains how a black hole in a spiral galaxy gradually swallows the whole galaxy and then explodes by particle annihilation in a gammaray burst to form a quasar. The quasar expands to form a spherical or elliptical galaxy of maximum size. Contraction then speeds up rotation, which flattens the contracting galaxy and then breaks up its outer portions to form spiral arms. This is the universe cycle of the birth, growth, aging, death, and rebirth of an individual galaxy in a stationary, infinite universe.

The big problem facing physics and cosmology today is whether to continue to protect the Big Bang and the standard model, regardless of the conflicting facts, or to pursue the causal science that Einstein demanded.

Alan L. Hausman New York, NY

Back to the drawing board?

Rather than *modifying* the accepted theory of gravitation by adding some cosmological constant, perhaps the theory itself ought to be reconsidered in light of new observations of gamma-ray bursts ("Are gamma-ray bursts standard candles?" SN: 6/18/94, p.397).

Emslie's possible (but improbable?) explanation that the drop-off rate of burst intensity may be due to an expansion that accelerates at greater distances because of a force opposing gravity may actually be more realistic than assuming standard candles for these enigmatic objects in order to prop up the standard model.

Robert V. Tucek Austin, Texas

CORRECTION

In "Adapting to Adoption" (SN: 8/13/94, p.104), the boy who was ordered taken from his adoptive parents by an Illinois Supreme Court judge is 3 ½ years old. not 3 ½ months old.

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