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**COVER:** Howard University's Monica Slack looks for promising new compounds against sickle-cell anemia—one of many efforts throughout the United States seeking to find effective treatment. See p. 104. (Photo: Joan Arehart-Treichel)

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# to the editor

## Challenging pseudoscience

The responses to your ESP article have pointed up again the absurdity of the interminable controversy over a scientific question which could have been conclusively settled at any time during the last forty years. Neither side has made any real effort to set up carefully designed and well-publicized experiments in which both believers and skeptics were adequately represented by competent and experienced authorities. The parapsychologists' reluctance is predictable and understandable, but it is about time the scientific establishment recognizes that it has an obligation, to itself and to society, to squarely challenge, and conclusively refute, even the most groundless pseudoscience, whenever it has managed, somehow, to achieve the status where an appreciable proportion of the population has the impression that it has a scientific basis.

D. A. Wilhelmson  
Palo Alto, Calif.

## Birth order and IQ

I would like to caution anyone, including the researchers involved, from reading too much into the findings of the study of birth order and number in relationship to intelligence "The Best and the Brightest?" (SN: 1/5/74, p. 13). Studies of other cultures and age groups might yield far different results.

I am a member of Mensa and, over the years, I have consistently scored in the 99+ percentile in intelligence tests covering the subjects listed in your article. As the last of six children, I should not approach that score if the study data could be validly extrapolated. While the number of people studied was impressive, they were all males born within a three-year span in a small, homogeneous country. Any number of factors, from epidemic to sunspots, could have influenced the results with such a closely allied group.

Ward W. Danekas  
Franklin Grove, Ill.

## Universe a black hole?

With regard to the letter of Louis Blazquez (SN: 9/29/73, p. 195), perhaps the following will help.

The last time Professor Chandrasekhar was in my office, I asked him, "If the big bang theory is right, how did we get out of the original black hole?" He replied, "We didn't; we're still in it."

Professor Chandrasekhar went on to say that the equations for the universe are essentially those for a time-reversed black hole. The radius of the observable universe is  $10^{23}$  centimeters. The Schwarzschild radius for the sun (that is, the radius that the sun would have if it were a black hole) is 2.5 kilometers. Since the Schwarzschild radius is directly proportional to the mass, and since the mass of the universe is usually taken to be  $10^{23}$  times the mass of the sun, the Schwarzschild radius of the universe would be  $2.5 \times 10^{23}$  kilometers (or  $10^{23}$  centimeters).

Undoubtedly, Professor Chandrasekhar gave me a simplistic explanation, knowing full well that I can't understand his formidable math. Nevertheless, his explanation satisfied me. I'm sure it would also make sense to the pupils in Blazquez's science classes.

Jeanne Hopkins  
Manuscript Editor  
The Astrophysical Journal  
University of Chicago Press  
Chicago, Ill.

## The summer of '37

Kristopher M. Greene's letter (SN: 1/5/74, p. 3) suggesting hyperbaric oxygen therapy for CO-poisoned fire victims (SN: 12/1/73, p. 348) reminded me (again) that I had proposed this idea (using 3 atm of  $O_2$  for CO poisoning as well as for anaerobic diseases and transfusion delays) in the summer of 1937.

The stimulation for the thought (during a "shortage" of lab animals) was the availability from the South Bend, Ind., pound of animals "destroyed" by CO (truck exhaust).

The poundmaster was cooperative and agreed to let us have the animals as fast as they "fell over."

The local shortage disappeared before we had a tank ready so the idea wasn't tried.

In 1939, another Purdue grad and myself had a one-man combination hyperbaric—high-altitude simulation chamber built for us. We ran out of money before we did much with it. The last owner junked it just a few years ago.

Over the years, I made several unsuccessful attempts to interest others in this possibility. You would be amazed by the number of experts who thought the chemical combination of CO with the blood was permanent.

Eventually, someone (independently) introduced the procedure.

William P. Lawson  
Hammond, Ind.

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