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COVER: Darwin's theory of natural selection is still a major tenet of evolutionary thought. But some theorists feel it doesn't explain all of the changes seen in nature. They proposed the much-disputed neutrality theory to take up the slack. See p. 124. (Darwin: Courtesy of National Library of Medicine.)

Publisher	E. G. Sherburne Jr.
Editor	Kendrick Frazier
Senior Editor and Physical Sciences	Dietrick E. Thomsen
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Biomedical Sciences	Joan Arehart-Treichel
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Writer/Copy Editor	Lisa J. Shawver
Art Director	Dale Appleman
Assistant to the Editor	Esther Gilgoff
Books	Margit Friedrich
Advertising	Scherago Associates, Inc. 11 W. 42nd St. New York, N.Y. 10036 Fred W. Dieffenbach Sales Director

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February 22, 1975

To the Editor

David Z

The surprise of the year: Finding our little boy's picture on SN's January 18th cover—and Joan Arehart-Treichel's comprehensive and well balanced article summarizing the immunological restoration "picture" will also be hard to top!

We were most pleased to see Dr. Rebecca Buckley's name mentioned as it was her earlier successes with bone marrow transplantation (picked up by Dr. James Wolff of Columbia Presbyterian, N.Y.C.) that got us to Wisconsin and Dr. Bach in 1967, barely in time. It still seems that the successes with the two Davids (who now know each other) have overshadowed all the earlier work done by the many dedicated people whose puzzle pieces paved the way.

Factually, David Z is really classified as "improved" rather than totally restored, as has been implied in various past articles. However, no one could dispute the classification of "miracle".

We truly wish that everyone in immunology could know of our gratitude—and share with us the heartwarming joy we experience every time our little buddy comes bounding in to report his latest discoveries in the wonderful, wonderful world of eight-year-olds.

Don Zeissett
(David Z's dad)
Chatham, N.Y.

Realities of emission controls

I would like to comment on the article titled "Technology and Emissions Standards" (SN: 1/4/75, p. 8).

As an automotive engineering technician of 12 years experience, I was surprised indeed to learn that the technology is available for production of cars that meet the 1977 pollution emission standards. I only wish the people on the National Research Council would enlighten me with this knowledge. I could become chief engineer!

It is time that the naiveness of these "experts" is brought to light and the "real world" facts be presented.

After 12 years working in research and development of automobile engines and emission control systems, let me say in the most simple terms, based on hard data resulting from thousands of hours of sweat and toil, that I do not have any proposal capable of meeting the 1977 standards on a mass production basis. Yes, we have experimental cars that can pass the 1977 standards, but what inexperienced outsiders fail to realize is that a laboratory-created masterpiece which manages to squeeze under the 1977 emission standards is not suitable for mass production. These vehicles are the result of countless hours spent by engineers with an unlimited

budget in an effort to expand technological frontiers. These cars are one-of-a-kind frailties which must be tuned, repaired and revised daily to maintain their elusive performance. Bits of knowledge from these projects spin off into production models to provides evolutionary progress, but they do not revolutionize the automobile.

But, just for fun, let us suppose that you did have a mass producible car that would meet published 1977 numbers. Think you've got it made? Sorry, not good enough! You failed to recognize that mass produced automobiles do not all perform exactly alike. Typically there is a 25 percent variation in emission levels. This means you must engineer your mean development car to be at least 25 percent under the standards in order to be certain the high limit emitters will pass. Now we've got it made, right? Wrong again! In addition, Federal regulations require that your car maintain passing emission levels for 50,000 miles! If tests show that emission levels on your car deteriorate during 50,000 miles, you must reduce the new car emission level by a factor equal to the 50,000 mile deterioration. It is not unusual, after all is said and done, to have to engineer the car to half the published emission standards!

In reality, then, auto engineers are forced to meet emission levels far below the published values. Because of this, the 1977 emission laws are not feasible for a mass produced automobile. (We can build a spacecraft capable of landing on the moon, but we can't mass produce them—especially not at a reasonable cost!)

J. Michael Manner
Inkster, Mich.

Bias against nuclear energy

Darrel E. Snyder's letter (SN: 1/18/75, p. 35) reflects a biased attitude toward nuclear energy. Nuclear-based industry is an integral part of our modern society and it is here to stay. I am convinced in my mind that the long-range energy needs of the United States are going to be supplied by nuclear power. It will be desirable on the part of the public that they understand to some degree the role nuclear scientists are playing in generating safe and pollution-free nuclear energy from fission and fusion processes.

The problems of public health, safety and security in a nuclear-dominated energy environment are challenging and are in no way insurmountable. The nuclear scientists can use some encouragement and appreciation from the society for which they work so hard. If one carefully looks in the past, the benefits from atomic and nuclear industry are far more than the harms and losses, and it can be more so in the future if the public cooperates with nuclear scientists and confides in their judgement.

M. A. Ijaz
Associate Professor of Physics
Virginia Polytechnic and State University
Blacksburg, Va.

Address communications to Editor,
Science News, 1719 N Street, N.W.
Washington, D. C. 20036

