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**COVER:** Some outer segments in a rod of the retina of the eye. Once light strikes the outer segments—the first step in vision—the rod is electrically excited and signals nerves in the brain. The brain forms an image of what the retina has seen. Much is being learned about the role of rods in this vital sensory process. See p. 408. (Scanning electron micrograph: Deric Bownds and Stan Carlson, University of Wisconsin)

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# LETTERS

**Chimp self-awareness and morality**

The criterion for being a person, claim some philosophers, is not so much a matter of the amount of intelligence one has but rather a matter of being self-conscious. If this claim is correct (and there are good reasons for thinking that it is), and if Gallup's research ("Self-Awareness: Humans Are Not Alone," SN: 5/28/77, p. 340) is in fact "striking evidence" that chimps and orangutangs indeed possess a sense of self" then we are under a moral obligation to treat them as we (ought to) treat human persons. Following Kant, we must never use persons as mere objects but must always treat them with dignity and respect, as intrinsically valuable beings. Just as there is no logical connection between being self-conscious (being a person) and being a member of the white race, so there is no logical connection between being self-conscious and being a member of the human species. Though *racism* among rational human beings may be an issue of the past, Gallup's research should guard us against *speciesism* of the present and future. If we err concerning the nature of persons and consequently about which individuals ought to get treated as such, at least let us err on the side of including too many under that concept so that we are sure that we are fulfilling our moral obligations to beings who are possibly persons.

Mary Ann C. Richter, Ph.D.  
Appalachian State University  
Boone, N.C.

**On the beat?**

Recording Dietrick Thomsen's articles may not be "a piece of cake" (Off The Beat, SN: 5/28/77, p. 351), but consuming this one was sheer delight.

As a graduate of English literature sharing a house with a molecular biologist, I have embarked (no less valiantly than Quixote) in exploration of the challenging and somewhat mysterious world of scientific inquiry presented by SCIENCE NEWS each week. I was recently pleased to find a featured article on the meshing of two long opposed cultures—the sciences and the humanities (SN: 2/19/77, p. 122). Publishing Thomsen's comic story in SCIENCE NEWS is a literary example of the harmony that can exist between the two. Hopefully, "Off The Beat" will become a regular part of SN but perhaps you could change the title to "On The

Beat"; after all, creativity and science go hand in hand, don't they?

Linda Vitale  
East Aurora, N.Y.

**Brain, electronics and epilepsy**

I read with interest the work of Ronald J. MacGregor in the article "To Build a Brain" (SN: 3/5/77, p. 156).

Even before his statement, "We hope these techniques will be useful in investigating basic principles that will improve our understanding of diseases. . . . Take epileptic seizures, for example. There are lots of theories around. If we can use electronic and digital models for spelling them out in detail, we may be able to validate a theory," it became apparent how significant this work will be in understanding how an epileptic seizure occurs and in what direction medications or other mechanisms should be developed in order to inhibit seizure activity.

It could mean relief to all those whose seizures are not controlled. In the United States alone, 4 million people are estimated to have epilepsy. Of these persons, 50 percent are unable to obtain control of seizure activity on a regimen of the anticonvulsant medications currently available.

It is good to know that others are pursuing activities about a problem, such as epilepsy, that has been with man since recorded history but is still not understood.

Reina Berner, MSW, ACSW  
Epilepsy Foundation of America  
New York, N.Y.

**BART energy consumption**

The data by Charles A. Lave of the University of California at Irvine alleging 4,610 BTU per passenger mile as BART energy consumption (SN: 2/12/77, p. 106), is quite incredible. Alistair Sherret of Peat, Marwick, Mitchell & Co., has published data that indicate approximately 0.1 kw-hr per seat-mile, and, on the average, 15 percent fill. This leads to 493 watts per passenger-mile, or 1,683 BTU. Data from TRANSIT RECORD of the New York City Transit Authority (Vol. LVI: NO. 6) shows 210 watts per passenger-mile, or 717 BTU. Average load is much greater in New York.

W.H.T. Holden, P.E.  
Pasadena, Calif.

*Our printer's typesetting computer was struck by lightning and put out of commission for five days this week. Variations in type in this week's issue are due to the necessity of typesetting on a variety of different equipment.—Ed.*

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