

NOTES FROM OUR READERS

BISHOP SWEDBERG AND SCIENCE

What is known of Bishop Swedberg's attitude toward science? In *The Swedenborg Epic* (p. 18) Mrs. Sigstedt comments on Swedenborg's early scientific leanings and says:

Bishop Swedberg himself . . . although not an enthusiast for science, was too broadminded to oppose his son's natural inclination.

Contrast this with an item in a work entitled *A History of the Warfare of Science with Theology in Christendom*, by Andrew D. White. N. Y., D. Appleton & Company 1896, at page 60:

. . . In a letter to Eloius, Linnaeus tells of the rebuke given to science by one of the great Lutheran prelates of Sweden, Bishop Svedberg.

Occasionally water had been observed to change to a reddish color, as though turned to blood. Such a "miracle" having occurred in Sweden, Linnaeus looked into it carefully and found the reddening to have been caused by the sudden appearance of dense masses of minute "insects." The account continues:

News of this explanation having reached the Bishop, he took the field against it; he denounced this scientific discovery as "a Satanic abyss" (*abyssum satanae*) and declared "the reddening of the water is not natural" and "when God allows such a miracle to take place, Satan endeavours and so do his ungodly, self-reliant, self-sufficient, and worldly tools, to make it signify nothing."

Linnaeus is said not to have argued the point further; though apparently he stated privately that the sudden appearance of the great numbers of insects was miracle enough for him.

It might be added that the work from which this is quoted makes no mention at all of Emanuel Swedenborg or of his efforts to reconcile science and theology.

E. BOYD ASPLUNDH

IN DEFENSE OF TELEOLOGICAL EXPRESSIONS

In the April issue of the *NEW PHILOSOPHY* there appeared a note from Morna Hyatt on teleological expressions, citing an article by Mervin E. Oakes. That Prof. Hyatt and I agree on the fundamental issue is apparent from her own words: "Our effort in science teaching should be to emphasize teleology, to search for causes and purposes, and to study the evidences of design in nature." But I feel that she was kinder than necessary to Mr. Oakes. Since the title of her note was phrased as a question, I would like to take the liberty of continuing the discussion.

As a teacher, I have been guilty of uttering expressions far beyond those that irritated Mr. Oakes into writing his article: "Ice floats to prevent the ocean from freezing"; "The planet Mercury keeps the same face toward the sun to provide a temperate zone for habitation"; "The abdomen is boneless to facilitate surgery." Such statements would be especially annoying to a non-teleologist, because they deal with things that do not cry out for an explanation, teleological or otherwise. Oakes' argument was primarily against using teleology to account for processes that might be "explained" otherwise. A choice example was his own description of why a plant turns toward the light. To say that it is by "unequal growth of the leaf-stem or petiole" neatly avoids the issue of whether it is at all fortunate that the turning is not in the other direction. It would be grimly amusing to hear a similar explanation of why a mother bird hobbles away from her nest. It would be, by Mr. Oakes' standards, ill-advised to say, "as if her wing were broken," and positively forbidden to add, "in order to distract an enemy." The whole thing would probably be characterized as a nervous reaction.

What is to be gained by avoiding allusions to causes and purposes? Is this campaign directed toward making science as uninteresting as possible? If a science teacher adhered to the idea of eliminating teleology, he would have to ignore half the questions asked by high school and college students, and *all* questions asked by younger children.

Like most major errors, this one is based on a "great cause" that leads people to abandon their natural reactions. In this case the cause is the engendering of the "scientific attitude." This term refers to a complete objectivity that restricts a scientist to

recording what he can measure and believing what he can prove. It makes him observe such things as that a flock of sheep has just been sheared "on this side," and prevents him from thinking (while in the laboratory) about whether his mother loves him or how well oxblood shoes go with a steel gray suit.

This attitude, besides being so impractical that it must be abandoned during ordinary human existence, blinds the scientist to much of what goes on in the laboratory. To maintain it an observer must become oblivious to coincidences. If he allows himself to notice how many of the accidental conglomerations of molecules in this universe favor human life or human freedom, he may drift into teleology and be swept away by its dreadful allurements. He can account for fortunate organic coincidences by "evolution," clutching his amulet inscribed "Survival of the Fittest." But to such things as infant helplessness in humans, which oppose this idea, or to apparent cooperation from inanimate nature, he must close his eyes tightly, hoping that science will some day explain it all away.

The very simplest explanations of nature's phenomena appear resplendently to the practicing teleologist. God created the universe in order that there might be a heaven from the human race. The means to this end appear everywhere in creation. They are divergent in many external details, but cohere strongly as to ends and purposes.

My own opinion is that no great scientist ever had a "scientific attitude" in the sense previously described. Certainly the greatest of them were characterized by its opposite. They made their discoveries by seeking order in chaos, by refusing to believe that nature could be capricious. Swedenborg was an outstanding example. When he examined metals or chemicals or the human body, it was always with the attitude that a wise Creator made them. Every detail was for the sake of some use. Why does a human being constantly circulate air through his lungs? Scientists of the eighteenth century sneered at the idea that the blood could draw any sort of nourishment from air. It took a teleologist to discover oxygen.

Certainly the science teacher must avoid overdoing this aspect of scientific thought; Prof. Hyatt pointed out some of the excesses that could do damage. But I believe Mr. Oakes wanted more than moderation, and that he would think her attitude too lenient.

He seems to want teleology extirpated from science teaching, and if he had his way I believe science teaching would suffer a severe setback.

The most important point to remember after reading Mr. Oakes' article is that teleological expressions must be very carefully avoided *when talking to Mervin E. Oakes* or others of his kind! Every expression is a communication, and what is appropriate for one audience is wrong for another. When we come into contact with a man with a "scientific attitude" we must, if we want to communicate with him at all, use his own terms. We can talk to him about science without using teleological expressions; the exercise would be comparable to discussing religion without using terms peculiar to the Writings. The truth will stand up for itself without teleological interpretation, and we should allow it to do so whenever we address scientists with divergent philosophical views. But to impose the same sort of censorship on what we say to our own students (particularly in New Church schools) would be to deprive them of the best part of science for the sake of an end that I myself consider very dubious even from a scientific standpoint.

KENNETH ROSE

WHAT ARE PEOPLE SAYING?

Concerning the Nature of the Mind

In *Time* magazine for October 13, 1961, there is a discussion of the work of Jerome Bruner at Harvard's new Center of Cognitive Studies. This experimental work continues the program suggested in a small book Bruner wrote about a year ago, *The Process of Education*. Apparently this work has already made an impression on some educators in New Church schools. We read in the first paragraph of the chapter called "Readiness For Learning" as follows:

We begin with the hypothesis that any subject can be taught effectively in some intellectually honest form to any child in any stage of development. It is a bold hypothesis and an essential one in thinking about the nature of the curriculum. No evidence exists to contradict it; considerable evidence is being amassed that supports it.

Some idea of the task that lies ahead for studies is implied in the observation as reported in *Time* as follows:

How humans think and learn has been investigated enough by teachers and