LETTERS

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Hungarian Scientists in the United States

December 1957 marks the first anniversary of the arrival in the United States of America of many Hungarian scientists from Austria, Yugoslavia, and other countries as a result of the Hungarian freedom fight.

On this occasion we want to thank the National Academy of Sciences, which understood our problems and came to our aid in finding homes and jobs for us in the New World. The Academy initiated a program of professional placement of scientifically qualified persons among the refugees. Between 19 Dec. 1956, and 1 May 1957, the Academy assisted more than 750 of the Hungarian scientists at Camp Kilmer. Between 1 May and 8 December the Academy had an office in Brooklyn, New York, which helped several hundred more Hungarian refugees to find professional positions in this country. In March the Academy sent a special mission to Vienna to help us, and in August it sent another mission to Yugoslavia.

Through the Academy's program most of us have found work in our own fields, and the program continues for the few people who have not found suitable work and for the other few refugees who are still arriving in the United States. The Academy has given some of us study courses in English to help us in our new positions. The majority of the scientists have been placed in positions where they can continue their research work or further their education.

On this anniversary the many refugee scientists from Hungary wish to thank the National Academy of Sciences and the many universities, institutes, research laboratories, and industrial companies for their wonderful help. We all hope that our temporary home will become our permanent home, and we hope to prove our worthiness.

MANUELA KOGUTOWICZ
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On the Vitalistic-Mechanistic Controversy

I have discovered a "new" kind of bird. It has fur and mammary glands and most people call it a mammal but that is just because of their ignorance and prejudice. "The idea" of a bird which suckles its young "is altogether new. But it is of outstanding importance, and *we must become used to it*" (italics mine). Sounds silly, doesn't it? However, it is simply a paraphrase of Koch's [*Sci. Monthly* **85**, 254 (1957)] quotation from Bronowski on the "new" kind of machine which "covers all the basic actions of living things, from the search for food in the lowest cell to the boldest creations of the human imagination" and which everyone else calls a "living thing."

Therefore, while we can take consolation in the fact that the author's "justifiable conclusion [page 255] seems to be that the vitalistic-mechanistic controversy, in its original formulation, is now almost meaningless for scientists," nevertheless I don't believe that calling a living thing by a new name—"predictor"—changes its nature one iota. "A rose by any other name. . . ."

Finally, with what "*testable* standards" (italics mine) does the author (page 255) propose to "fetter" the flight of the poet or the brush of the artist?

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Father Yancey's paraphrase, perhaps, was meant to ridicule Bronowski's estimate of the great importance of the idea of an organism as a predictor. However, his choice of a bird with fur and mammary glands as an altogether new idea hardly makes an effective analogy. Yancey's argument does sound silly because it is so patently false. The monotrematous mammal has been known to exist for a long time, and the duckbill is listed in all encyclopedias and dictionaries. Its Latin name, *Ornithorhynchus,* clearly refers to its birdlike characteristics.

Presumably, Father Yancey has no logical arguments with which to refute my conclusions and so has used a stratagem with which he hopes to sidestep the basic issues on which we have differing opinions. In his essay on "The Origin of Life" [*Bios* **23**, 212 (1952)], he concluded that the idea of emergent evolution "does not differ essentially from spontaneous generation," and that this in turn is nothing more than "the development of life from non-life by chance."

Modern theories of evolution entail the transactional relationship of causal patterns as well as of random factors, and the process giving rise to protoplasm is not believed to have recurred in later geological periods of the earth's history. It is apparent that Yancey prefers to argue logically only when he can make the initial assumptions.

Thus, having made the assumption that God's words, as recorded in the Bible, are the absolute truth, one cannot be surprised that he is able to prove to himself that God "endowed matter with the power to develop into more and more complex forms until, when capable of supporting what we now call 'life,' this would emerge from a 'seminal reason' that He had implanted there in the original creation" [*Bios* **23**, 215 (1952)].

I heartily agree with my critic that the nature of a material object is utterly independent of the language which we may apply to it, even when the language comes from the Christian Bible, or from St. Augustine.

Finally, Yancey imputes that I propose to fetter the flight of the poet and the brush of the artist with testable standards. In my article [*Sci. Monthly* **85**, 246 (1957)] I specifically stated that I do not deny the importance of such truth as might be embodied in a great painting or a musical composition; I am happy to add to these the flight of the poet. But my original conclusion still stands. These subjective aspects of truth will never be as reliable a guide for behavior and belief about objective phenomena as scientific inquiry. And I believe this is especially true in the field of morality or values.

It is curious that some vitalists assume that scientific theory is based on rigid determinism, whereas others make the accusation that it is based on chance alone. The two ideas are directly contradictory and are both false. But of course, the dissociation is convenient, and so the hapless scientist is assumed to be a mechanist when the question concerns the nature of life [*Bios* **23**, 7–25 (1952)] and a believer in chance alone, as above, when it is the origin of life that is under discussion.

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Cancer Research

In the issue of *Science* for 20 December [**126**, 1283 (1957)], I noted that a board of scientific counselors has been appointed to pass upon and to direct cancer research at the National Cancer Institute.

The fields of interest represented by these men are virology, surgery, pharmacology, medicine, radiology, and physical chemistry. In view of the fact that the genetics of cancer has been so brilliantly represented in cancer research at Bethesda, and since genetics plays a role in many cancers in man, I suggest that a geneticist in the field of cancer research should be added to this board.

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