I think, reflects my own limitation in such an attempt and also his own opposition to Teilhard's views. His Brix quotation seems to indicate this, too. A more complete critique by scientists, philosophers, and theologians who present both the pros and the cons of Teilhard's thought can be found in *The World of Teilhard,* edited by Robert T. Francoeur (1961: Helicon Press, Baltimore).

As for the "Christogenesis" direction of man to God: I feel that Teilhard believed that Christ redeemed *all men* and wills that all men be directed to the Godhead, whether or not they know him or acknowledge him.

Were Teilhard alive today, I trust he would feel amply vindicated by the church's present response to his work. An examination of the literature on Teilhard testifies to this acknowledgment of him.

CITATION INDEX CAN AID HISTORICAL FLOW SHEETS

The article by Daryl Gilson Miller and Doris Malkin Kraemer, "Historical Flow Sheet Shows Relationships in Scientific Thought" (1973: *ABT* 35 [1]:31), was most interesting. I have been using a related technique in my classes at the University of Pennsylvania since 1965; see my article "Location of Milestone Papers through Citation Networks" (1970: *Journal of Library History* 5:184). And it happens that the very example used by Miller and Kraemer—the history of DNA—is the one on which an extensive project was carried out at the Institute for Scientific Information; see *The Use of Citation Data in Writing the History of Science,* by E. Garfield, I. H. Sher, and R. J. Torpie (1964: ISI, Philadelphia).

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Daryl G. Miller and Doris M. Kraemer comment:

We were pleased to have Eugene Garfield's letter and its enclosures brought to our attention. We consider the use of historical flow sheets or maps a versatile technique in the many teaching situations we described. Garfield has demonstrated the usefulness of such networks in facilitating library research and in making the scanning of publications amenable to computer programming, as well. The elucidation of the DNA molecule lends itself well to both pursuits, because it was such a significant event in the history of science.

GENETIC ENGINEERING

After reading "Genetics and the Quality of Life," by Bruce Wallace (*ABT* 35[4]:183), I think it is important for us to consider the extent to which we support genetic manipulation. Certainly, we do not want to knowingly cause genetic damage to future generations. However, in my opinion, no one, including geneticists, has the ultimate right to direct any genetic control. Scientists play an important part in the maintenance of the race and the direction of future generations, but we must not forget that we only play a part; we have no right to try to have total control.

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COMPULSORY EDUCATION

I was extremely pleased to read of the editor's position regarding compulsory education (*ABT* 35[3]:114). We must surely come to the realization in the not-so-distant future that many of the ideals of instruction in science and other areas can only be achieved under a "free education" system rather than a forced schooling system.

For instance, individualization when instructional modules are the major component depends entirely upon student motivation. Students must want to acquire the skills to mastery or criterion and must want to continue working until they do. The pitfalls of these materials when used in the public schools is that many "unmotivated" students zip through the materials just to get done and get out.

Relevance is also a two-way street. Through carefully designed instructional systems students are "prepared" to perceive materials as relevant. However, on the other hand, students must bring experience to the school which facilitates this perception. It's not inconceivable that adolescents and college students and adults working in society require this free time, away from the forced schooling situation, to gather sensory data from a highly complex and rapidly changing technologic society before "schooling" becomes relevant.

Finally: Our society is rapidly changing. It is skill- and performance-oriented. Those of us working in society recognize the need to be continuous learners. Somewhere along the line education must impart the skills that facilitate continuous learning and a continuous-learning ethic and, consequently, adaptation to a rapidly changing society. Forcing adolescents to remain under the forced, protective canopy of compulsory schooling until the age of 18 just does not make sense, given the conditions that exist. Schools need not change radically, but they must permit students to voluntarily enter them to seek knowledge that they have found facilitates their adaptation to the environment.

One must learn to communicate, count, make rational decisions about the environment and its destruction, maintain his body in good physical condi-

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