rational, reasonable recourse in continuing (but recently interrupted) quality medical education.

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Samuel Goldhaber, in his report on the "Yale system" of medical education (News and Comment, 14 Sept., p. 1029), quotes me several times, but he has quoted out of context.

To begin with, I do not spend the greater part of my day wondering "Have I gotten everything out of it?" I made this comment in reference to the first few months of my first year at Yale. This time would be a period of adjustment for anyone, at any institution. Yes, even Harvard.

As I told Goldhaber, after working for grades in a competitive college setting, I found some realignment of my approach to learning vast quantities of new material to be in order. But herein lies the main reason why I and many of my fellow students came to Yale. The thought of no longer having to measure my knowledge by the hourly exam in fact prompted my application. The Yale student is afforded the unique opportunity to absorb those vast quantities of new material in much the same way as he will when he is no longer in medical school (although still very much a student). The majority of students at Yale have both the motivation and desire to study the practice of medicine in such a manner. My 3 years at Yale have been nothing less than enjoyable, in every sense of the word.

To state, as Goldhaber does, that the "Yale system is in serious trouble" (p. 1031) and to imply that the quality of medical education can be judged on the basis of National Board ranking is not justified.

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Slow Viruses

In the report "Slow viruses: Role in persistent disease" (Research News, 29 June, p. 1351), Jean L. Marx states, "A conventional virus has . . . been isolated from the brains of patients suffering from SSPE [subacute sclerosing panencephalitis]." She then describes the conclusion of John Sever and his colleagues that it is probably the absence of specific cellular immunity for measles virus in the host that is responsible for the development of SSPE. Although it is possible that future studies will indeed prove that this is correct, in the light of our present knowledge, we must challenge this viewpoint.

There have been a number of viruses isolated from patients with SSPE (*1*), and they have all been shown to react with measles antibody. Two of these agents, the JAC virus and the LEC virus, have been examined thoroughly in our laboratory and found to be different from a strain of wild measles virus. These differences are apparent in their growth pattern (*2*), susceptibility to suppression by antimetabolites (*3*), distribution of viral antigen in the cells (*2*), ultrastructural pattern of growth (*4*), and encephalitogenicity for experimental animals (*5*). All of these data, not cited by Marx, point to the fact that the agents we studied were not "a conventional

Darkfield photomicrograph of desmids, a unicellular algae.

[measles] virus." On the other hand, we are not aware of any evidence that establishes any a priori abnormalities of patients with SSPE. The studies of Byington and Johnson (*6*) on weanling hamsters may suggest that immune failure does play a part in the pathogenesis of this disease, but the other animal experiments indicate that development of subacute encephalitis occurs in perfectly normal hosts. It is of interest that these normal animals which do develop encephalitis fail to generate humoral antibodies against the SSPE viruses, whereas control animals challenged identically with measles virus and free of subsequent encephalitis do develop antibodies against the infective agent. This would tend to suggest again that it is the agent rather than the host that bears a major responsibility for induction to the disease.

We do not wish to claim that we have an explanation for SSPE, but only to point out that it has not yet been found.

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Charles Whittlesey

The editorial on government forest policy by Henry Clepper (24 Aug., p. 703) is appreciated by the historically minded and is appropriate and well done, but unfortunately contains two errors. Charles Whittlesey (misspelled Whittlesly in the editorial) is listed as a horticulturist. He was primarily a geologist (for whom Glacial Lake Whittlesey was named) and second an archeologist (for whom the Whittlesey Culture was named). Later, he became a prolific historian, writing, among other things, the *Early History of Cleveland, Ohio* (*1*). His work in horticulture was minor and scarcely worth mentioning.

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Irrationalism

Charles Frankel's use of the term "irrationalism" in his article "The nature and sources of irrationalism" (1 June, p. 927) to characterize the assertions of certain eminently rational persons such as R. D. Laing and T. Roszak inveighs against a group which develops its views well within the bounds of traditional rationalism. For instance, Laing, in stating that there is no such "condition" as "schizophrenia" and that the label is "a social fact and the social fact a political event," is indicating that in his opinion the concept of schizophrenia as a form of illness is not justified by logic and experience and yet continues to determine our reactions to a certain class of behavior with consequent effects which are not necessarily beneficial to those involved. And certainly, Roszak's criticism of Freud on the basis of the doubtful possibility of being able to specify where the "intrapsychic" gives way to the "external world" utilizes rationalism in its best sense to specify a very basic problem in the justification of Freudian psychology. What Laing, Roszak, and others like them oppose is the narrow and uncritical application of certain modes of science and reason to the human state that fail to be adequate to their proclaimed purpose, in spite of their effectiveness in the nonhuman world. They further argue, still in the rational mode, that these inappropriate applications distort relationship in a way which significantly detracts from human experience.

As a psychiatrist, I share the doubts of these men and believe that the development of modes of science and rationality which will be adequately appropriate to human function is a task of the future. In the meantime, let us differentiate between those who, by virtue of their very real experience in dealing with human problems, are critical of certain ways of applying rationality to human events and those (perhaps correctly called "irrationalists") who reject all rationality as though it were an invention of the devil. Even this latter possibility should not be totally rejected by one who considers himself fully rational. After all, the allegory of the Garden of Eden is not simply nonsense.

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To discover "the nature and sources of irrationalism" is a difficult task for anyone. Unfortunately, for one who is steeped in rationalist tradition, it becomes almost impossible. To be an irrationalist is not to deny science, but to see it as knowledge and to let this knowledge grow into wisdom. Science would tell us that a work of art is a collection of canvas and paint. Wisdom would reveal its beauty.

Frankel states that "Thanks to science, the present world makes available . . . the story of evolution." If we look back in time, I believe that Darwin was considered irrational by his contemporaries. The use of Copernicus as an example of a scientist (rationalist) is also tenuous, as Copernicus considered himself an astrologer first and an astronomer second.

I think the lesson we can learn from Frankel's article is not that reality and appearance are separate, but that the mind can often see those things which the eyes cannot.

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The thoughtful essay by Frankel clearly defines many of the significant characteristics of rationalism but fails to provide a practical answer to those who today are searching for answers to the problems of everyday life. Rational analysis can solve problems once a problem reaches a level of awareness, but most of life proceeds at an experiential level for which the term rational is meaningless. One must not make the mistake of calling "rational" all activities which can be subject to rational analysis. For example, the act of walking can be analyzed in terms of highly sophisticated biomechanical and neuroanatomical concepts, and physicians do so for patients with impaired gait; for the healthy infant, child, or adult, how-