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OF THE WEEK

RESEARCH NOTES

ARTICLES

DEPARTMENTS

COVER: A laser can really light things up — especially if they are fluorescent. And it can do it more sensitively, more precisely and more selectively. The Lawrence Livermore Laboratory's latest system for exciting molecular fluorescence, developed by Lloyd Steinmetz (rear) and Jeffrey Richardson (foreground), starts with ultraviolet light from a krypton laser, which pumps a dye laser that emits tunable blue-green, which makes a tube of gas fluoresce yellow. See p. 314. (Photo: Livermore)

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LETTERS

No kudos for Kety

How appropriate that two consecutive issues of SCIENCE NEWS treat psychiatric research. The studies of Taylor and Abrams (SN: 9/30/78, p. 230) show that research using criteria supported by the American Psychiatric Association will result in meaningless data, or worse. Then we read about the studies of Kety (SN: 10/7/78, p. 244), whose recent report on "viral" schizophrenia apparently ignores the kind of question raised by Taylor and Abrams. More important, Kety hypothesizes a virus (!) to explain the greater incidence of schizophrenia in lower social classes. Aside from the question whether those class-oriented data are valid, depending on criteria used, there is the further concern for causal inplication. To characterize a virus as one "whose propagation is favored by congestion, poor living conditions and less than optimal hygiene" is to give a purely social definition, one which links socioeconomic class and virus directly. The criteria for definition — even though only a hypothesis — seem to be getting even looser! To see how much Kety is working with (and obscuring) a chicken-or-egg type of argument we need only notice that he refers to a congenitally transmitted virus "associated with deafness and school failure...recently found to have twice the prevalence in lower socioeconomic groups as in middle class populations." Does it seem strange in our society that those who are deaf and fail in school should be at least twice as likely to *end up* in lower socioeconomic groups? If congenitally transmitted, where did its appearance begin? Very likely, at the point where the family moved into a lower socioeconomic bracket.

Bruce Eastwood
Lexington, Ky.

Responding to Dr. Seymour Kety's suggestions concerning the etiology of schizophrenia in winter-born persons: Dr. Kety noted that the unusually high incidence of such syndromes may be due to either birth trauma and other environmental factors, or might be caused by a viral infection peculiarly incident in the winter or summer seasons. In terms of research priorities, other seasonal variables, such as maternal nutrition and activity in the first trimester of pregnancy, and effective population density and ambient temperature in the months succeeding birth, would appear to be more easily accessible. These indices are also affected by the socioeconomic and demographic factors (i.e., aggravated vulnerability for the urban lower class) mentioned by Dr. Kety.

The psychotic symptoms connected with the later stages of Wilsons's disease, Huntington's chorea, and metachromatic leukodystrophy are associated with the destruction of the corpus striatum, deep nuclei, and the cerebral cortex of the central nervous system, and are the result of autosomal genetic disorders.

All in all, while the potentials for research are exceedingly intriguing and clearly worthy of pursuit, the particular approach advocated, investigation of a tissue-specific seasonally incidental viral infection, seems a cold hope.

Norman Chapman
Cambridge, Mass.

Mental age vs. IQ

The linguistic accomplishments of Koko, the Stanford-educated gorilla, are certainly impressive, and I enjoyed Joel Greenberg's article (SN: 10/14/78, p. 265) very much.

It is probably a mistake, however, to say that Koko's IQ is between 85 and 95. A Stanford-Binet IQ score is derived from age norms: The performance of a 12-year-old child is compared with that of other 12-year-olds. Seven-year-old Koko's performance was apparently compared with that of seven-year-old children. But since gorillas mature faster than children, that comparison is not valid.

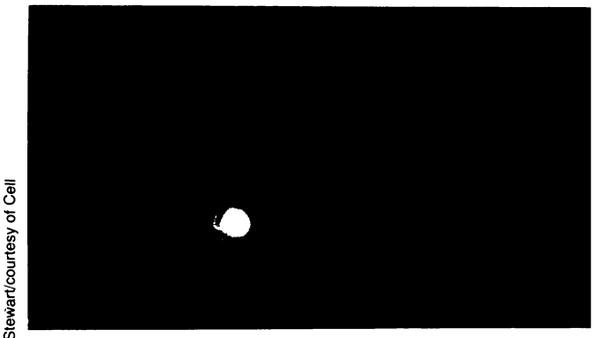
If, for example, you compared a three-year-old gorilla with three-year-old children, the ape would come up with an IQ around 200; at age 16 that same gorilla would score nearer to 50. Because of the differences between gorillas and people in maturation rate, mental age is a better measure than IQ. In other words, Koko is about as smart as the average five- or six-year-old.

Paul Chance, Ph.D.
San Luis Obispo, Calif.

Correction:

The third paragraph of "Microscopy's Bright Side" (SN: 10/28/78, p. 298) should have read: "Finding the proverbial needle in a haystack becomes less of a challenge when the needle is glowing and the haystack and surroundings are all black. The goal of the sensitive fluorescence techniques is to present the glimmer of dye-labeled structures against a solid black field."

On the same page the photo and caption should have been:



Stewart/courtesy of Cell

New dye, Lucifer Yellow (left), fluoresces more brightly than dye formerly used.

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