

There was no such control group in the study and therefore no conclusions can be drawn from it about these authors' enrichment hypothesis.

A second problem concerns their defining as "malnourished" all the children in their study who were below the 3rd percentile of a "Korean reference standard" for both height and weight when admitted to the adoption agency. There may be various reasons not related to nutrition differences why some children are the smallest. For example, different Korean populations, with differing norm values for height and weight, may have been disproportionately represented in the sample of adopted children. Such considerations raise the reasonable possibility that one or more variables associated with low weight and height, exclusive of malnutrition, are also associated with IQ, and might account for some of the difference found between the IQ's of the smallest (mean IQ, 102) and the largest (mean IQ, 112) children. It should be noted that, since the IQ of the smallest group is equal to the American average, there is no evidence of long-term deleterious effects of malnourishment upon intellectual performance.

One thing we can reasonably infer from the article is that these children were well fed after they were adopted, and that at least some of them had been poorly fed before being taken in by the adoption agency. Therefore, a reasonable conclusion from these findings is that in a group of children in whom nutritional rehabilitation occurred prior to 3 years of age there is no evidence of subsequent intellectual impairment as measured several years later by IQ or school achievement tests. These data can be viewed as an empirical extension of the Dutch findings that malnutrition during pregnancy had no measurable effect upon later intellectual capabilities (1).

VICTOR H. DENENBERG
Departments of Biobehavioral Sciences
and Psychology, University of
Connecticut, Storrs 06268

References

1. Z. Stein, M. Susser, G. Saenger, F. Marolla, *Science* 178, 708 (1972).

We are in complete agreement with Denenberg that the experimental design of our study was not perfect. Fortunately the kind of "control group" he seeks was not available. We cannot agree that our data are an "empirical extension of the Dutch findings," which were related to prenatal rather than postnatal malnutrition. The average drop in birth weight in the Dutch study was about 10 percent (9.6 percent) whereas the children we ex-

amined were by definition more than 40 percent below ideal weight. We cannot be certain from our data that the children with a mean IQ of 102 have reached their maximum potential, since the two other groups had higher IQ's. The use of height and weight data recorded at the time of admission to the adoption agency to establish nutritional status is standard practice, and all of the children in the malnourished group met the international classifications for being severely malnourished (1, 2). Many studies have documented what happens to such children if they are returned to their original environment. Their IQ's and achievement scores are much lower (2, 3). Finally, Denenberg states that "nutritional rehabilitation . . . prior to 3 years of age" is followed by "no evidence of intellectual impairment. . . ." Certainly adoption of Korean youngsters into middle-class U.S. families implies more than just adequate food. We don't know which other factors are important. We can only say that the new environment has in some way made the difference.

MYRON WINICK

Institute of Human Nutrition,
Columbia University College of
Physicians & Surgeons,
New York 10032

References

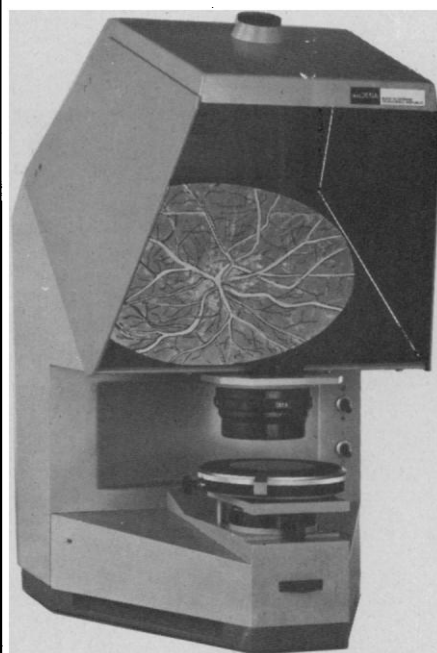
1. F. Gomez, R. Ramos-Galvan, S. Frenk, J. M. Cravioto, R. Chavez, J. Vasquez, *J. Trop. Pediatr.* 2, 77 (1956); D. B. Jelliffe, *WHO Monogr. Ser.*, No. 53 (1966); D. S. McLaren and W. W. C. Read, *Lancet* 1972-II, 146 (1972).
2. M. Winick, *Malnutrition and Brain Development* (Oxford Univ. Press, New York, 1976).
3. H. G. Birch, C. Pinero, E. Alcalde, T. Toca, J. Cravioto, *Pediatr. Res.* 5, 579 (1971); M. E. Hertzog, H. G. Birch, S. A. Richardson, J. Tizard, *Pediatrics* 49, 814 (1972); J. Cravioto, E. R. DeLicardie, H. G. Birch, *ibid.* 38, 319 (1966).

Discovery of the Monitor

With the many accomplishments of the Woods Hole Oceanographic Institution and the submersible *Alvin*, it is definitely not necessary to cite a newspaper report which credits them with an extra one (News and Comment, 26 Aug., p. 848). The Civil War ship *Monitor* was found by a team of scientists based at Duke University using Duke's ship *Eastward*. The team was headed by John Newton (Duke), and included Doc Edgerton (Massachusetts Institute of Technology), Bob Sheridan (University of Delaware), and Gordon Watts (North Carolina Department of Archives and History).

RICHARD T. BARBER
Cooperative Oceanographic Program,
Duke University Marine Laboratory,
Beaufort, North Carolina 28516

Improve your Image



JENA makes a film viewer that makes you more efficient. Simplify research, do more, learn more with DL-2. This compact, desk-top unit provides glare-free, superior image quality of virtually any filmed document or transparency. Accommodates perforated and unperforated 35mm or 16mm roll film, sheet film up to 105mm x 148mm, film strips. High resolution objectives of 4 different magnifications. Adaptable also for projector use.

JENA

Desk-Top Universal Viewer DL-2

Write for Free Catalog.

International
Micro-Optics
5 Daniel Road East,
Fairfield, New Jersey 07006
(201) 227-6767



Jenoptik Jena G.m.b.H. GDR-69 JENA, Carl-Zeiss-Strasse 1
Exclusive U.S. Distributor aus JENA