

Letters

On physiology and delinquency

Analytical chemist William Walsh's contention ("Locks—A Key to Violence" SN: 8/20/83, p. 122) that inborn chemical imbalances may be at the root of much of our criminal violence is, we suspect, unwarranted and a bit naive....

Since many, if not most, habitual criminals have a history of alcohol abuse, drug abuse, poor nutrition, or all three, innate factors may be of trivial consequence in producing their antisocial behavior. Walsh's found differences between the hair samples of the episodically violent and the antisocial personality disorder may simply be due to the differences in the two groups' relative health or lack of health. Age may be critical.

We suggest Walsh take a look at magnesium deficiencies since delirium tremens is a disorder typically characterized by a state of hypomagnesemia. Low cobalt levels are not uncommon in alcoholics either, since cobalt is an integral part of the structure of the B-12 vitamin. Dietary potassium and sodium deficiencies exist in most chronic alcoholics when drinking heavily due to depressed electrolyte intake, poor intestinal absorption, and increased urinary loss of electrolytes. Rather interestingly, an iron overload has also been seen in patients with chronic liver disease common to long term alcoholism (see Olson, 1968). Further, it is widely known that high lead levels are not unexpected either, since it is common knowledge that youngsters who come from high crime environments characteristically live in substandard housing with peeling paint.

The hypoglycemia-junk food connection with crime and violence being explored by Bar-

bara Reed may have some important treatment implications as far as carbohydrate intake is concerned, but again, we doubt that hypoglycemia is an innate disorder. Moyer (1975) reported a number of studies relating hypoglycemia to violence and Bolton (1973) described one particularly aggressive Indian culture in Peru, the Qolla. In a personal correspondence (1976), Bolton readily admitted that the Qolla had a very poor diet, and further admitted that they were extremely aggressive parents—two significant environmental stressors. Our own research (Welsh, 1976) and the work of others (see Langner, Gersten, and Eisenberg, 1976) clearly indicates that nearly all individuals who are delinquent or aggressive are the products of unusually physically punitive and stressful childhoods. Since the release of epinephrine and norepinephrine, and blood sugar levels are both highly related to stress, an imbalance in the system due to protracted childhood stress is quite possible. Finally, it seems rather doubtful to us that most violent behavior is innately determined when one carefully examines the extremely difficult childhoods of those who eventually require incarceration. Considering the amount of stress they have experienced growing up, a normal biochemistry would be more unexpected than one differing from normals.

Ralph S. Welsh, Ph.D.
Clinical Psychologist
Jane C. Welsh, R.D.
Clinical Dietitian
Bridgeport, Conn.

Bolton, R. Aggression and Hypoglycemia Among the Qolla. *Ethnology*, 1973, 12, 227-257.

Bolton, R. Personal Correspondence from Cusco, Peru, 12/28/76.

Langner, T. S., Gersten, J. C. and Eisenberg, J. G. The Epidemiology of Mental Disorders in Children: Implications for Community Psychiatry (paper presented at the Fourth International Symposium of the Kittay Scientific Foundation, N.Y., March, 1976).

Moyer, K. E. A Physiological Model of Aggression. Does it have different implications?, in Fields, W. S. and Sweet, W. H. (eds.) *Neural Bases of Aggression*. St. Louis: Warren H. Green, 1975, 161-195.

Olson R. E. Nutrition and Alcoholism, in Wohl, M. G. and Goodhart, R. S. (eds.) *Modern Nutrition in Health and Disease*. Philadelphia: Lea and Febiger, 1968, 767-781.

Welsh, R. S. Severe Parental Punishment and Delinquency: A Developmental Theory, *Journal of Clinical Child Psychology*, V. 5, N. 1, Spring, 1976, 17-21.

While I was gratified to see the psychobiological position surveyed in SCIENCE NEWS, I was a bit piqued at the "Gee Whiz Mr. Science" tenor of the article, and the failure to tie William Walsh, Barbara Reed, Alexander Schauss and Robert Thatcher into some of their antecedents, and into some of the lengthy and replicated work that has been done in this field....

In 1977 I published my dissertation, "A Psychobiological Study of Delinquents," demonstrating that a simple count of minor physical anomalies, a standard complete blood cell count, and a standard lipid profile could be pattern-analyzed to predict (at .88, $p = .001$) the outline of a delinquent's career. I also reported a low copper with high calcium pattern in episodic violence. The role of lead, assayed in hair, blood, tissue or urine, has long been documented in delinquency and disability. It is now abundantly clear that biological issues are central in delinquency and mental health, and it is time for the public to insist that research funds go into scientifically replicable methods rather than the fraud and shambles which has consti-

tuted "therapy" for at least 100 years. Correct the body, and you are very likely to correct the delinquency.

One only wishes Janet Raloff had tied newer studies into the substantial work done on schizophrenics' GSR patterns, minor physical anomalies in hyperactive boys and hypoactive girls, neuropsychological deficits in delinquents, and common diseases found in nearly three-quarters of mental hospital populations as well as other evidence for a biogenesis in delinquency. On the other hand, hearty congratulations for shining the light of science into this dim corner. Freud once predicted that psychotherapy would become psychopharmacology and he was right.

George von Hilsheimer, Ph.D., F.R.S.H.
Maitland, Fla.

... While the article is written in an interesting way, it is clear that neither the writer nor your editorial board were aware that the information presented is neither objective nor scientifically sound.... We [the California Council Against Health Fraud] thought you might be interested in a position statement on diet and criminal behavior which we have prepared....

"The belief that violence and crime are products of improper diet is being promoted by a growing number of individuals. This belief, rejected as unfounded by the consensus of scientifically-trained health professionals, appears to be accepted as "fact" by many educators, probation officers, social workers, criminologists, and legislators. Recently, some correctional facilities, homes for delinquent youths, and even some schools, have been pressured to make changes in available foods based on the belief that there is a proven link between diet and criminal behavior.

"However, a causal relationship between diet and crime has not been demonstrated. And, diet is not an important determinant in the incidence of violent behavior....

"Evidence used to support such beliefs may sound dramatic, but it is largely subjective evidence presented by believers. This evidence consists primarily of anecdotal case reports, and reports of studies that have not been conducted under carefully controlled conditions. Nevertheless, the impression is given that there is a large body of scientific evidence which establishes a link between diet and certain behavioral disorders that lead to violence and crime....

"Dietary improvements based on established information are desirable. However, dietary changes based on popular but erroneous beliefs are unjustified and can carry considerable risks to the physical and social health of individuals and of society."

Helene Swenerton, Ph.D.
Extension Nutritionist
Univ. of Calif.
Davis, Calif.

Corrections:

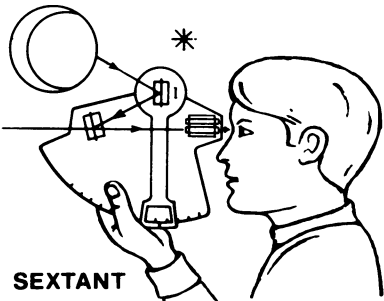
In "Calcium, chlorine and heart disease linked" (SN: 8/13/83), the percentages given for human calcium intake levels are the mean, not absolute values.

In "The Longest Day" (SN: 7/9/83, p. 21), the rate of change in the earth's rotation was given as .003 seconds per day. This is actually the error accumulated each day; the time it takes for the earth to complete one turn on its axis is currently increasing at the rate of .003 seconds per century.

STIMULATE INQUIRING, YOUNG MINDS...

with a THINGS membership. Kits mailed each month have materials to use, and a booklet giving background on the science subject and easy to follow instructions for exciting demonstrations and experiments.

Designed for young people 10 to 16, parents often enjoy them too!



SEXTANT

IDEAS FOR SCIENCE FAIRS-AN INTERESTING HOBBY-A HELP IN DECIDING ON A CAREER-A GIFT THAT'S FOR THE WHOLE YEAR;

JOIN NOW!

MAIL WITH REMITTANCE TO:

THINGS of Science

RD 1, Box 130SN
Newtown, PA 18940

GIFT CARD SENT IF REQUESTED
1 YEAR - \$17.50 2 YEARS - \$33.00
EACH ADDITIONAL MEMBER - \$16.00
CANADA AND MEXICO ADD \$6.50;
OTHER COUNTRIES ADD \$9.00.