

A BASF statement says the product shows "exceptional tear strength," but repeated questioning could not persuade a company spokesman to back the statement with figures.

If the new process does come into use, losses are foreseen for companies that concentrate on spinning and weaving, such as Burlington Mills and J. P. Stevens and Company, and firms that supply them with synthetic fibers, such as Du Pont and Monsanto.

The gainers are likely to be the so-called integrated textile companies, those that make everything from fiber to cloth, like Japan's Toyo Rayon and Britain's Courtauld's, as well as chemical companies with strong positions in plastics, such as BASF and Union Carbide. ◇

DRUGS

The physician as addict

Although the typical drug addict in the United States is from the lower socioeconomic level, unmarried, city-bred and 18 to 25 years of age, the physician addict is different. He is about 38 years old, married, may or may not come from a city, and is of the higher income group.

The rate of drug abuse or addiction among physicians is from 30 to 100 times that of the general public, a California attorney told the Federation of State Medical Boards recently. The American Medical Association estimates that some 60,000 of the country's 316,000 doctors misuse drugs of various kinds.

The drug abuser among physicians has a pre-disposing personality for addiction, and suffers from overwork and fatigue. Since drugs are readily available, they are an occupational hazard. Usually the doctor has been in practice some years before he takes up the habit.

The encouraging thing about this group of addicts, however, is that in many cases they can be rehabilitated. Richard K. Turner, deputy attorney general of California, says the earlier that state medical boards can prove cases against such doctors, the better the chances for rehabilitation.

About 95 percent of the first offenders are placed on probation, Turner says. About 85 percent of the second offenders have their licenses either suspended or revoked.

One study of 68 physicians discharged from the Public Health Service Narcotics Hospital in Lexington, Ky., reveals that morphine and demerol are the most commonly used drugs. Many of these doctors also used barbiturates and alcohol in addition to the narcotics.

I.Q. DISPUTE

Genetics vs. headstart

The embers of the oldest dispute in psychology—nature versus nurture—have been fanned to white heat once again, this time by a Berkeley professor. And the flames are beginning to lick through the academic woods, creating heat and even a little light.

The pyrotechnic scholar is Dr. Arthur R. Jensen, a psychologist at the University of California's School of Education.

His view of the overwhelming primacy of nature—or heredity—as a determinant of intelligence is set forth in a 123-page article in the Winter 1969 issue of the prestigious HARVARD EDUCATIONAL REVIEW.

After arguing that environmental factors are not nearly as important in determining the Intelligence Quotient as genetic factors, Dr. Jensen analyzes the environmental influences which may be most critical in determining I.Q. He concludes that prenatal influences may contribute the largest environmental factor, but genetics dominate nevertheless.

A basic finding of Dr. Jensen's research is that environment acts as what he calls a threshold variable. Extreme environmental deprivation can keep a child from performing up to his genetic potential, but an enriched educational program cannot lift him above this potential.

Dr. Jensen emphasizes the point that new educational methods must be developed which take advantage of the mental abilities of children from deprived backgrounds.

But there is more to the Jensen study than just another vote for heredity in its ancient struggle with environment for the allegiance of behavioral scientists. Dr. Jensen also contends that the Federal Government's widely publicized effort at compensatory education for the children of deprived minority groups is a failure.

He attacks what he sees as the central notion upon which these programs are based: the idea that I.Q. variations are almost completely a result of environmental differences and the cultural bias of the tests themselves (SN: 3/8, p. 243). He also argues that it would be better to teach specific skills to the children born into poverty than to try to raise their I.Q. scores through emphasis on abstract learning.

As though all this were not enough to bring the intellectual pot to a boil, Dr. Jensen speculates that social class and racial variations in intelligence cannot be accounted for by differences in environment.

"The idea that the lower average

intelligence and scholastic performance of Negroes could involve not only environmental, but also genetic factors has indeed been strongly denounced," Dr. Jensen says, "but it has been neither contradicted nor discredited by evidence." And, he adds, "the fact that a reasonable hypothesis has not been rigorously proved does not mean that it should be summarily dismissed."

Asked whether he was concerned that racists might seize upon portions of his research and, by quoting them out of context, belabor those who seek to improve race relations, Dr. Jensen says: "I don't want to give these people the power of censorship over my research. I know many fine scholars who didn't submit research because of the fear that it might be misinterpreted. I think it is important that people read my article before making interpretations of it."

He observes that the part of his study that dealt with racial differentials on I.Q. scores constituted less than five percent of the total research, although this was the part that has received the most attention. Dr. Jensen was also careful to note in his paper that "since, as far as we know, the full range of human talents is represented in all the major races of man and in all socioeconomic levels, it is unjust to allow the mere fact of an individual's racial or social background to affect the treatment of him."

Dr. Jensen's genetic explanation for intelligence variation does not satisfy Harvard's Dr. Jerome Kagan, who is among those invited by the REVIEW to counter Jensen's points in the upcoming spring edition. Dr. Kagan illustrates his objections with an analogy to physical stature:



Harvard

Dr. Kagan: Nurture does it.

"There is no doubt that stature is inherited," he says. "Height is controlled by genetic factors. The more closely related two people are, the more similar their height. It is also true that Indian children living in the rural areas of most Central or South American countries are significantly shorter than the Indian children living in the urban areas of those countries."

According to Dr. Kagan, the flaw in Dr. Jensen's logic is that it suggests that the shorter stature of the rural children is due to a different genetic constitution.

Dr. Kagan finds the essential error in the genetic argument to be the conclusion that if a trait is under genetic control, differences between two populations on that trait must be due to genetic factors.

Prof. J. McVicker Hunt of the University of Illinois notes that the stature of human beings "appears to have increased by nearly a foot without benefit of selective breeding or natural selection."

Dr. Hunt also disagrees strongly with Dr. Jensen's assertions on genetic differences in intelligence among the races, as does Prof. Lee J. Cronbach of Stanford. "The genetic populations we call races no doubt have different distributions of whatever genes influence psychological processes," Cronbach says. "We are in no position to guess, however, which pools are inferior."

In Dr. Kagan's child psychology laboratory variations in test scores among white children of different backgrounds are observed as early as one or two years of age.

"Lower class mothers spend less time in face-to-face mutual vocalization and smiling with their infants; they do not reward the child's maturational progress, and they do not enter into long periods of play with the child," Dr. Kagan reports.

"Our theory of mental development suggests that specific absence of these experiences will retard mental growth and will lead to lower intelligence test scores."

Applying this argument to racial differences on such tests, Dr. Kagan notes that "the most likely determinants of the black child's lower I.Q. score are his experiences during the first five years of life."

Mental tests administered by Dr. Francis Palmer of the City University of New York to middle- and lower-class black children in Harlem resulted in few differences in scores after the examiners had established emotional rapport with the children. Dr. Kagan observes that such results lend support to the idea that it is important that a child understand the nature of the test he is taking, and that

he feel comfortable in the presence of those who are giving him the examination.

Another objection to genetic explanations of I.Q. scores is raised by William F. Brazziel, director of general education at Virginia State College in Norfolk, who points out that "if 90 percent of the black people in America have ancestors that include white people, how can we tell when black genes or white genes make for a wrong mark on a test score sheet?"

Dr. Jensen's criticism of Federal compensatory education programs draws a spirited dissent from Dr. Hunt.

EUROPEAN AIRBUS

A case of who-builds-what



Lockheed

Pushing as many passengers as possible on short hops is the goal of the airbus.

The rapid growth of air travel between the closely packed population centers of Europe has for years called for a special type of aircraft. This is the airbus, designed to carry far more passengers than today's airliners, but over short routes, many of which are shorter than the 500 miles from New York to Chicago.

A problem facing Europe, however, is that few if any of its countries can handle the development and manufacture of such a new plane individually. Besides an expensive research and development effort, manpower and production resources are necessary to turn out the planes rapidly and economically enough to capitalize on the market.

Europe's major aircraft industrial powers, France, Britain and Germany, have been talking about pooling their resources on a single aircraft. But there have been several flies in the ointment. One is nationalism; another is economics.

Even in consortium, the finances of each country will be severely tried by the costs of the airbus, now estimated at about \$430 million for development

"Compensatory education has not failed," he says. "Programs which made an effort to inculcate cognitive skills, language skills and number skills show fair success. If the parents are drawn into the process, the little evidence available suggests that the effect on the children, and on the parents as well, increases in both degree and duration."

In reply to critics who charged him with failure to give compensatory education enough time to prove its case, Dr. Jensen says: "These programs have already been evaluated by the Government itself, so I think it was appropriate for me to comment on them."

alone. Cost, in fact, was responsible for reducing the passenger capacity of the proposed plane from 300 to 250, a result of changing to an engine that is less powerful than the one originally planned, but on which the development costs have already been paid (SN: 2/8, p. 144).

The major uncertainty in the tri-nation plan, however, is Britain, which is considering backing an all-British plane, the BAC 311 of British Aircraft Corp., instead of taking part in the consortium's craft, dubbed the A-300B.

Meanwhile, France and Germany strive to keep Britain in the project. "They'd damn well better get the English in with them if they're serious about making it pay off," says an official of the McDonnell-Douglas Corp.

In February, the German cabinet announced that it would continue supporting the project even if Britain withdraws. Chancellor Kurt Georg Kiesinger confirmed the decision a month later, a move seen as a vote of confidence in hopes of retaining Britain.

French President Charles de Gaulle has made a similar decision for his