PSYCHOLOGY

White Is Bigger to Whites

Negro and white differences on an optical illusion test may indicate contrasting social attitudes or may show genetic variations for the groups—By Elizabeth Mirel

➤ RIDDLE: How are black and white babies like black and white boxes?

Answer: They may be the same size and shape, but people think they are different.

For the babies it is called social attitudes; for the boxes, just opitcal illusion. But optical illusions can tell a lot about social attitudes, maintains Dr. Thomas F. Pettigrew, Harvard University social psychologist.

He showed drawings of boxes to 50 Negro and 50 white boys, whose ages ranged from 10 to 14. The black box was on a white card, and the white box on black. Both boxes were five-eighths inch square. The cards were held ten feet from each boy.

White boys nearly always said the white box was bigger, Dr. Pettigrew reported. Negro boys, to a statistically significant extent, correctly said the boxes were the same size.

Dr. Pettigrew and his assistant, Ronald L. Nuttall, presented the results in Perceptual and Motor Skills, 17:98, 1963.

The illusion is so "compelling," Dr. Pettigrew said, the black box has to be made 10% bigger before white people will see the boxes as equal.

It is a case of "simple symbolism," Dr. Pettigrew told SCIENCE SERVICE. "You tend to see more powerful things as bigger," he explained, "and you tend to think of bigger things as more powerful."

Many Negroes, Dr. Pettigrew said, are trying to become integrated in the "dominant" white American society. Their orientation to the white world shows up in the optical illuison test, he concluded.

Tests on 200 adult Negroes revealed pro-integrationists were more susceptible to the illusion than non-integrationists. The adults' attitudes on integration were determined by the strength of their drive for achievement, and whether they chose Martin Luther King or Louis Armstrong as their favorite Negro.

African Negroes, according to an earlier French study, "fight the illusion" better than whites and, Dr. Pettigrew pointed out, even better than American Negroes. This may be because the black African is powerful in his own right.

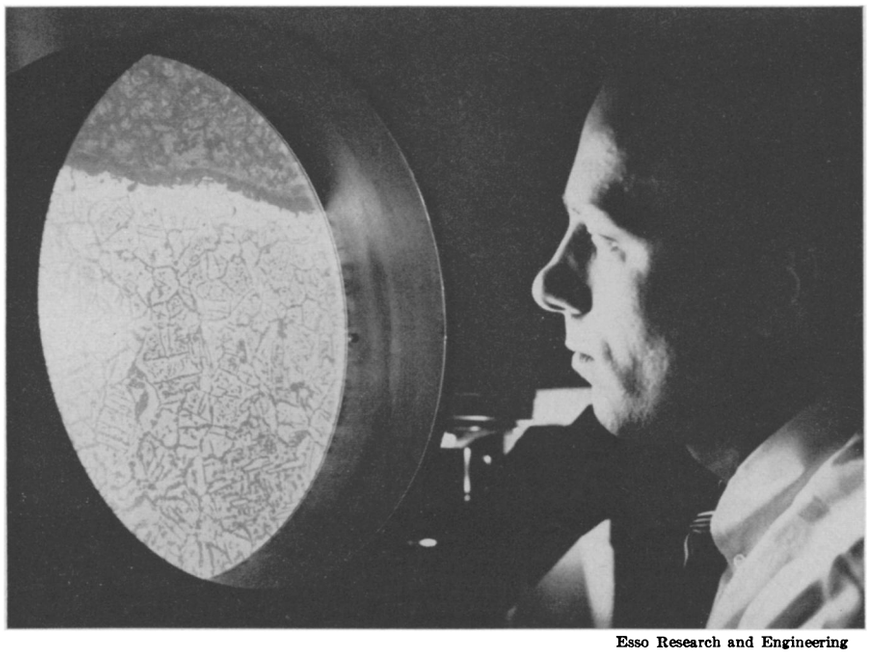
He said he "just did it for fun" to see if he could replicate the French study. Much to his surprise, he succeeded.

Of course there is another way to explain the whole business. It could be, Dr. Pettigrew admitted, that the Negroes just have better "visual acuity," meaning they can tell the outlines of distant objects somewhat better than whites can.

African Negroes, more "racially pure," could see the illusion better than American Negroes, whose genes are mixed with those of Caucasians.

More stringent laboratory tests are needed for proof. Dr. Pettigrew gave the tests to children and adults of both sexes as he was polling their opinions on other issues.

• Science News Letter, 84:229 Oct. 12, 1963



Esso Research and Engineering

INSIDE AN ALLOY—The intricate composition of an alloy is studied by an Esso research technician who is peering into the viewer of a metallograph, a microscope for metals and metallic compounds. The alloy may one day be part of a refinery unit.

PSYCHOLOGY

Drugs Cause More Loss Of Memory Than Shock

➤ LARGE DOSES of barbiturate drugs cause a memory loss in rats even more severe than electric shock, long used for the treatment of mental patients.

The shorter the time between training and drug dosage, the greater the memory loss for the maze-running problem, Dr. James L. McGaugh, a University of Oregon psychologists, reported.

The amounts of drugs given were sufficient to cause unconsciousness but not death. They were far greater than the normal therapeutic doses taken by human beings, Dr. McGaugh told an International Symposium on Learning, Remembering and Forgetting at Princeton University.

The drugs caused from 25% to 30% memory loss up to three hours after the training period. At six hours, no memory loss occurred.

A charge of electricity large enough to cause convulsions and unconsciousness must be given within an hour after the training period to cause memory loss.

Clinical observations of the effects of electric shock, tranquilizers and other drugs on mentally and emotionally disturbed patients have spurred research scientists to investigate the precise chemical and physical occurrences in the central nervous system during learning and memory storage.

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GENERAL SCIENCE

Negro Medical Student Was Science Fair Winner

➤WILHELM D. MERIWETHER, a winner in the 1959 National Science Fair-International, enrolled this semester in Duke University Medical School, Durham, N. C., the first Negro to do so.

Mr. Meriwether recently was named one of 11 winners of a four-year medical scholarship awarded by the National Medical Fellowships, Inc.

Both in 1959 and 1960, when Mr. Meriwether was in high school, his projects on dog parasites reached the nationals in youth science fairs sponsored by SCIENCE SERVICE.

His projects were entered first in the Palmetto State Science Fair, Orangeburg, S. C., sponsored by the Palmetto Education Association, Inc. In the 1959 fair, his entry won the American Veterinary Medical Association Award, the Navy Science Cruiser Award and a fourth prize in the biological sciences category.

At that time he said: "Before attending the NSF-I and the AVMA convention I was still considering medicine as a career, but I saw that veterinary medicine was just as interesting, challenging and potentially successful." Now, with his scholarship, he has returned to his original interest.

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