

BEHAVIOR

Now you feel it, now you don't

Research on human perception is sometimes hampered by the fact that some of the body's sense receptors are responsive to more than one type of information. This is especially true of the sense of touch. The skin contains more than one type of receptor sensitive to mechanical information. Research conducted by Ian E. Gordon and Colin Cooper of the University of Exeter in England suggests that it might be possible to isolate and even to enhance certain types of finger-tip perception. The work is reported in the July 17 *NATURE*.

The effect, which they say does not seem to have been reported previously, is easily demonstrated and is probably familiar to certain craftspeople. First, rub the fingers of one or both hands back and forth across a fairly smooth surface, such as polished wood. Note the accompanying tactile sensations. Next, place a piece of paper under the fingers and rub the surface as before, moving the paper with the fingers. It will be found that any gradual undulations in the surface which were hitherto undetected are more perceptible.

Under experimental conditions, subjects were asked to examine a series of steel blocks, each of which had been ground smooth and flat except for a central, raised rectangular strip. Subjects attempted to detect the strips with and without paper held under their fingers. In most cases the paper enhanced perception. Even when the strip was only 0.0127 millimeters high, it was detected by almost 80 percent of the subjects using the paper. Without paper, less than 60 percent were able to correctly detect the strip.

If rubbing an undulating surface commonly induces more than one kind of sensory input, the researchers explain, then a highly sensitive system, such as that associated with light pressure, may interfere with input from deeper pressure receptors. The response to roughness, for instance, might mask the response to more gradual surface changes. The effect of placing paper under the fingers may be to reduce the masking, thus allowing the more sensitive input to be used in detection.

To change or not to change

Anyone who has ever taken a multiple choice exam has probably had the urge to go back and change a few of the original answers. This urge, however, is often squelched by an instructor's stern warning: "Once you've marked an answer, don't change it. The odds are you will lower your score." But both the odds and the warning may be wrong, says Richard E. Davis of the Eastern Virginia Medical School.

Davis collected data from objective examinations given at the medical school. In the July *JOURNAL OF MEDICAL EDUCATION* he reports that of the answer changes made by students, incorrect-to-correct changes occurred about 2.8 times as often as did correct-to-incorrect changes. "Speculation as to why answer changes are more frequently beneficial than not," he says, "seems to include the possibility of subliminal stimulation of stored information."

I lost it at the movies

"The Exorcist" was a real shocker of a movie, but for some people, it was too much of a shock. Four patients in Cincinnati are known to have been affected by "cinematic neurosis" shortly after seeing "The Exorcist," says psychiatrist James C. Bozzuto in the July *JOURNAL OF NERVOUS AND MENTAL DISEASES*. Insomnia, excitability, hyperactivity and irritability were among the complaints of the patients. The problems were alleviated, says Bozzuto, during sessions in which the movie was used to help patients explore their conflicts.

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PUBLIC HEALTH

Smallpox update

This was to be the year in which the World Health Organization hoped to eradicate smallpox (SN: 2/1/75, p. 74), making it the first disease ever to be wiped out. According to a status report in the July 10 *FRONT LINES* (house organ of America's AID program, a major contributor to the effort) the deadline may still be met.

In the first half of this year, 95 percent of 12,000 reported cases occurred in Bangladesh (the rest were in India, Ethiopia, and Nepal). Stanley Foster, WHO team leader in Bangladesh, blames last year's floods for exacerbating the problem there. As large numbers of people migrated to find food and escape the rising waters, the disease spread with them.

But D.A. Henderson, WHO's chief of smallpox eradication, remains optimistic. Though 939 villages remained infected last month, he believes that number can be reduced to 100 by August. "It's the last battlefield," he says confidently, "and the hardest."

Malaria setbacks

While smallpox and many other diseases for which immunization exists continue to decline, malaria is staging a comeback in many areas. A World Health Organization eradication campaign began in 1955, and so far the disease has been wiped out in 37 countries (including the last vestiges in Europe). India alone was reckoned to have some 75 million malaria victims in 1955, but though that figure fell to less than 200,000 in 1967, the total has now climbed back up to 2.8 million. Probably a million children in Africa will die from malaria this year alone.

Part of the problem has been an increasing immunity of the transmitting mosquito to DDT. And biological controls—such as introducing predators or sterilization—have not yet become effective. The eradication program thus continues as a hard, uphill struggle blessed with no "miracle weapon," and WHO is currently exhorting member nations to attempt renewed vigor in their campaigns against the mosquitoes.

Who follows a guru?

What sort of people seek out the currently popular gurus preaching a variety of mystical religions in this increasingly secular country? Alexander Deutsch, a psychiatrist with NYU's Health Service, studied the young followers of an American-born guru named Baba to find out. His conclusions are summarized in an article by John Wykert in July 16 *PSYCHIATRIC NEWS*.

The dominant feature of the followers was a previous history of basic unhappiness, beginning usually with an unsatisfactory relationship with one or both parents. Parents were often described as "distant, domineering, or harshly critical." Mothers of 7 of the 14 followers had experienced significant psychiatric symptoms, usually depression. One father had been hospitalized for manic-depression. Almost all the parental marriages were described as unhappy.

Pot and public health students

Those who advocate suppressing marijuana use through public health programs may be chagrined to learn the results of a survey published in the June *AMERICAN JOURNAL OF PUBLIC HEALTH*. Graduate students in the University of California at Berkeley School of Public Health were questioned about their own experience with the drug, and researchers found that 92 percent favored legalization, 76 percent had used marijuana themselves, and 43 percent were current users.

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