

Seeking psychotherapy

The decision to seek psychiatric care is often independent of the degree of psychiatric disability. The affluent and well educated, for instance, seek psychiatric help more often than do the poor who may need it but cannot afford it. George E. Vaillant of Harvard Medical School attempted to find out which men, among economically successful college graduates, seek psychotherapy. He compared 112 middle-aged men who had made 10 or more visits to a psychiatrist with 531 peers who had not. Vaillant reports in the December *AMERICAN JOURNAL OF PSYCHIATRY* that occupational failure, never marrying and heavy alcohol use (all indirect factors of mental illness) were not correlated with seeking psychiatry. Instead, those men lacking in social supports (stable marriage, sports participation, church attendance, etc.) and those experiencing subjective ill health were most likely to seek psychiatric help. Thus, Vaillant concludes, a disproportionate share of psychotherapists' time is going to comparatively healthy individuals. He asks, "Should scarce psychiatric manpower be used to help those with subjective or objective emotional impairment? Is a psychiatric patient someone who needs or someone who seeks a psychiatrist?"

Cross-modal ability

Humans can recognize two identical objects as equivalent when they touch one and see the other. It has been suggested that this cross-modal ability is dependent on language—visual and tactile objects are given the same name. Questioning this theory, Richard K. Davenport and Charles M. Rogers of the Yerkes Primate Center in Atlanta demonstrated cross-modal learning in chimpanzees and orangutans (SN: 5/6/72, p. 299). Now P. E. Bryant, P. Jones, V. Claxton and G. M. Perkins of the University of Oxford have shown it in infants who have no language.

They report in the Dec. 1 *NATURE* on experiments with 120 infants between 6 and 11.5 months old. The infants were allowed to touch but not see an object that made noise when touched. They were then shown two objects (the one that made noise and one of a different shape) and experimenters noted which they reached for. The majority reached for the one they had touched. This, say the researchers, demonstrates that cross-modal information can be transmitted without language and that such mechanisms are present at a very early stage in perceptual development.

Psychiatry and dentistry

When patients complain of acute pain, and the dentist can find no cavities or infections, it may be that the patient has been unconsciously—even in sleep—grinding and clenching the teeth. There may be a psychological reason for these symptoms says Leon Lefer, former dentist, now a psychiatrist at Columbia University College of Physicians and Surgeons. Speaking this week at the Greater New York Dental Meeting, he explained that psychological trauma such as separation from a parent could cause teeth grinding. "Mouth activities in all adults," he says, "bring back a hint of the days of being held warm and secure. Clenching the teeth and jaw may give the sense of holding on to the lost parental figure."

Digesting the news

The funny papers may be more palatable to human readers than the news section of a newspaper, but they aren't so good to eat. Researchers at Cornell University investigating the feasibility of feeding waste paper to farm animals as a source of cellulose have found that the presence of polychlorinated biphenyls in printers' inks makes the practice questionable. Recently there has been a good deal of interest in using discarded newspapers as a forage substitute. Donald J. Lisk and his colleagues examined about 100 newspapers and magazines for chlorine-containing organic compounds. They found that the amounts of hazardous chemicals in periodicals varies greatly. While some dailies had relatively low PCB content, most of the magazines had the potential for significant amounts of hazardous chemicals. The colored ink in funny papers contains heavy metals that make them less digestible than "straight news."

Polystyrene off New England

Researchers are finding all sorts of odd things in the ocean. Earlier this year a variety of plastic objects were reported in the Sargasso Sea (SN: 3/25/72, p. 205). Now, a team from Woods Hole Oceanographic Institution has found tiny polystyrene balls that may pose a hazard to fish in the coastal waters of New England.

They first noticed these particles while studying the effects of a nuclear power plant on the ecology of Niantic Bay and later went back to investigate in detail. Edward J. Carpenter and four others report in the Nov. 17 *SCIENCE* that there are two types of spherules, one clear and the other an opaque white, and that they average about 0.5 millimeter in diameter. The spherules are present in waters from western Long Island Sound to Vineyard Sound and may extend farther. The highest concentrations—up to 14 per cubic meter—were found in the Niantic Bay area.

The white spherules are consumed by fish and the oceanographers expressed concern that they may cause intestinal blockage in some of the smaller fish. The group conclude that the source of the spheres may be any of the many polystyrene producers in southern New England.

How pollutants form

Engineers at the Massachusetts Institute of Technology have been studying pollutant formation in automobile engines for four years and have now succeeded in quantifying the process.

John B. Heywood, James C. Keck and their colleagues have developed mathematical models to show how variations in engine operation and design can affect the formation of hydrocarbons, nitric oxide and carbon monoxide. The MIT research confirmed that reduction of nitric oxide emissions causes an increase in emission of the other two pollutants and reduces performance.

In addition, the team has modeled pollutant formation in gas turbine engines. The Environmental Protection Agency announced last month that it had awarded Chrysler Corp. a three-year contract to determine if a gas-turbine powered car can be made competitive with internal-combustion autos. Heywood and Keck believe development of a low-emission, high-performance turbine auto is still far off.