

Science at the AAAS

From our reporters at the annual meeting of the American Association for the Advancement of Science in Boston

The stereotype makes the man

By forcing people into prefabricated molds, stereotypes often become self-fulfilling prophesies. The all-too-popular "Polack joke" is a prime example of how a popular image can work to produce an individual rather than vice versa. Anthropologist Paul Wrobel of the Merrill-Palmer Institute in Detroit spent 16 months observing and interviewing Polish-Americans in a Detroit working-class community. He found that the men there were aware of their less-than-complimentary image and that it seemed to have produced feelings of personal inadequacy and low self-esteem. One man, for instance, said to Wrobel: "You're asking me how I would feel if my sons followed in my footsteps? Are you kidding? That's the last thing I would want to happen. They're gonna stay in school and study so they can get into college and get a good job—like working in an office, teaching school. Yeah, my kinds are going to wear suits and ties to work. And they're not gonna come home all smelly and dirty like me."

The negative image of the men was evident in other family members. Women were usually the key family and community leaders to whom others turned for guidance, strength and wisdom. Boys, encouraged to not be like their fathers, tended to see their fathers as failures. But even though family members and the men themselves sometimes reinforced the negative image, Wrobel blames society in general. "While there's nothing wrong with hard work," he concludes, "there is something very wrong with a society that says who you are is based on what you do for a living; there is something very wrong with a society which uses the color of man's collar as a measure of his intelligence. In America a man is considered unintelligent if he operates a drill press in a factory. And he is considered stolid and dull if he is Polish-American. The men in the community I studied are fully aware of what society says about them. It is tragic that so many believe it."

Hyperactivity: To treat or not to treat

Since 1937 it has been known that amphetamines can reduce the activity of some hyperactive children, making learning easier for them. Since 1970, this treatment has been under attack. Educators, child researchers and pharmaceutical manufacturers have been charged with attempting to overdrug and overcontrol normally healthy, active children. In 1970, for instance, it was reported that 5 to 10 percent of the 62,000 grammar school children in Omaha were being treated with behavior modification drugs. More recently, it has been reported that between 500,000 and 850,000 U.S. children are being given amphetamine-type drugs to keep them quiet and that these numbers have been doubling every two or three years.

Robert J. Havinghurst of the University of Chicago has examined the data on hyperactivity and its treatment and found claims of overuse to be exaggerations of fact. He suggests that only 1 percent or 300,000 school-age children are getting amphetamine treatment. He concludes that "In the small percentage of children whose medical doctors prescribe ritalin or other drugs, the school should cooperate fully."

'Access File D-828' 'ID' 'Home office'

The office of the future will probably still have a coffee machine and an executive washroom. But most similarities to the current, standard-issue office may well end there. In the office of the future, a Xerox Corp. researcher says, the computer will be king.

During the next decade, Jerry I. Elkind told a AAAS session

on future man-computer relations, computers will become widely used in offices. In time, he says, each office worker will have a cathode ray terminal or CRT (a keyboard and visual display system) on his or her desk. The CRT will be programmed to make, retrieve and transmit business documents and information. A secretary, for example, would retrieve a letter electronically and view it on the screen rather than remove a piece of paper manually from a file drawer. "One important thing," Elkind says, "is that we can't have the programs be so complicated that the person is more of a programmer than a secretary."

The technology exists now for the computerized office, he says, and the switchover awaits business rather than scientific advances. First, he says, the price per terminal must come down to about \$100. And second, there will have to be a high degree of standardization between competing brands of equipment. "Different vendors will want to attach equipment to the office system and there will have to be common protocols for the devices to talk to each other." This, Elkind says, "could be a nasty problem," Unfortunately, too, he says, the computerized office might require fewer semiskilled workers—file clerks, for example, and interoffice messengers.

American Indian medicines

Although "ethnic ignorance" prevented the white man from recognizing it for decades, historian Virgil J. Vogel says, American Indian medicinemen used a wide range of natural drugs and rational therapy to treat illness. More than 170 drugs which have appeared at one time in the official Pharmacopeia of the United States or the National Formulary were used by American Indians north of Mexico, and 50 more were used by Caribbean and Latin American Indians.

Vogel, an historian at Mayfair College in Chicago, described Indian medicines to a AAAS session on the history of biology in America. Peruvian Indians, he says, understood the narcotic effects of coca leaves hundreds of years ago, but cocaine was not used medicinally in the United States until 1905. Indians used several classes of botanical drugs, including anesthetics, stimulants, astringents, cathartics, emetics, febrifuges (antifever drugs), vermifuges (antiworm drugs) and poisons for rational therapy, Vogel says.

How gray is your garden?

"Urban agriculture" might sound like a contradiction to some, but more and more people are raising food in backyards, flower boxes and on rooftops in cities. This "back to the patch" ethic has its rewards, of course, in the form of home-grown fruits and vegetables. But it has its dangers, too. Heavy metal fallout from air pollution can accumulate and pose risks to the consumer of urban-grown foods.

Gil Friend, co-director of the Institute for Local Self Reliance in Washington, D.C., described some informal studies on urban produce to a AAAS session on urban food production. The levels of lead and cadmium in produce grown in Washington, Boston, New York and St. Louis differed widely. Friend concluded that the impact of air pollution on crops is "highly location specific." The issue is not a "red herring," though, he says, and needs further detailed study. In the meantime, he advises urban gardeners 1) to plant gardens as far as possible from heavily traveled roads, 2) to screen gardens from pollution sources with trees, buildings or fences, 3) to consider wind-borne pollution, 4) to wash produce in mild chloroform or acid solutions to remove surface contaminants (although this may leach away nutrients) and 5) to avoid growing greens (which tend to accumulate heavy metals) under severe conditions.