Behavior

The cowboy and the playboy

"From the time he is born, the boy is taught how to be a man. Outward signs of emotion are viewed by parents and society as signs of femininity and are deemed undesirable for a male. Everybody knows that big boys don't cry." This type of upbringing, says Jack O. Balswick of the University of Georgia, produces two types of inexpressive males: the cowboy and the playboy. The cowboy is the strong silent type and the playboy plays it cool with women. Both adhere to the culturally acquired male image that says shows of emotion (tenderness and affection) are distinctly unmanly. Both are likely candidates for divorce, says Balswick, who has questioned married couples, encounter groups and dormitory students as part of an investigation of the "inexpressive male."

More so than in the past, Balswick finds, women expect open communication from their husbands. Marriages that don't have open emotional relationships, he says, generally follow a common pattern. In the first stages, a wife becomes discontent after two or three years of trying to get the husband to share himself. In the second stage, she becomes apathetic and just accepts that "that is the way it is." Finally, if the wife feels emotionally deprived, she is ripe for a relationship with a male outside of marriage. This, says Balswick, may help explain and account for the fact that one in every three marriages in the United States ends in divorce.

Sexism in violence

While society teaches young males that some emotions are feminine, it also teaches them that violence is masculine. Not only society in general but mental health professionals in particular seem to condone violence in teen-age males while they deplore it in young ladies. This is the conclusion reached by psychiatrists at the Michael Reese Medical Center in Chicago. Their findings, based on a study of juvenile delinquents at the center, were reported at the recent meeting of the American Psychiatric Association in Detroit.

Therapists were asked to rate the individual teen-agers for likeability. These scores were compared with the amount of violent behavior displayed by the teen-age patients. The therapists disliked the violent males at first but then grew to like them. They had the same reaction to the quiet females. On the other hand, they grew to dislike the quiet boys and violent girls. And a therapist's likes reinforce behavior, even violence.

Liberating aggression

Traditional values may not foster violence and aggression in women but perhaps women's liberation will. This possibility has been suggested, but a study carried out by Alvin Atkins and Sharon Hymer of Yeshiva University in New York finds little relationship between women's liberation and physical aggression, at least not yet.

A group of women were rated on their support of the women's movement and then asked how they would respond to such problems as being assaulted. Would they strike back, do nothing, respond verbally, call the police, etc.? The liberated women were not found to be more aggressive. "Although women express favorable attitudes towards the women's liberation movement," Atkins explains, "corresponding changes in sex-typed behaviors, such as aggression, are often slower in surfacing."

Earth

The anti-thunderstorm clouds

They have been called the clouds that are nothing but a silver lining. Now that description may be more appropriate than thought. They help discourage thunderstorms.

The reference is to cirrus, the thin, high-altitude ice crystal clouds that on bright, sunny days sometimes stretch across parts of the sky like a row of wispy feathers.

Scientists with the National Oceanic and Atmospheric Administration have now found that cirrus can cause sufficient cooling at the earth's surface to prevent the formation of regional hot-spots in the lower atmosphere. This in turn could inhibit the formation of thunderstorms over bare, sun-baked portions of the central and western United States.

The NOAA scientists have been using infrared remote sensors to study the thermal effects of natural and artificial cirrus. In one set of experiments, a jet made overlapping contrails at an altitude of 40,000 feet, creating an artificial cirrus layer, while a research aircraft with an infrared radiometer monitored the effects on surface temperatures. These measurements showed a drop of 15 degrees C. that persisted for one hour after the clouds were generated.

"In other words," says Peter M. Kuhn, of NOAA's Environmental Research Laboratories in Boulder, Colo., "the sun is inhibited from forming hot plumes of air over open flat land by the presence of a cirrus cloud cover at altitudes of 30,000 to 40,000 feet. The layers of ice crystals contained in the cirrus clouds block the large input of solar power over the area, reflecting sunlight back up into the atmosphere. This results in a cooler earth surface. . . ."

The cirrus sun shade inhibits the rapid heating of air over potential hot-spot surfaces, such as plowed fields, thus reducing the chances for onset of the columns of vigorously convective air that lead to thunderstorms.

Recent satellite observations have confirmed the effect: The spread of cirrus over an area indeed inhibits the outbreak of severe thunderstorms.

Sun, caves and ice ages

What causes the ice ages? There are at least half a dozen hypotheses. Most of the theories involve only the earth itself, but one, the so-called Milankovitch hypothesis, is an astronomical theory of climatic change. According to a modified form of the hypothesis, long-term variations in the earth's orbit cause the seasonal amount of solar radiation reaching earth to change throughout time, even though the annual amount of radiation remains constant. During periods when summer insolation is a minimum, there will be a glacial climate at high latitudes. When the summer insolation is a maximum, an interglacial climate is expected.

Using a new climatic indicator based on fluctuations in water-caused deposits of minerals in caves, three scientists at McMaster University in Ontario have constructed a glacial chronology that supports the astronomical theory.

The idea is that mineral deposition in caves probably ceases during glacial periods due to a lack of seepage water. Peter Thompson, Henry P. Schwarcz and Derek C. Ford dated phases of mineral deposition in caves and compared the cycles with summer insolation curves. In general, the evidence shows that when minerals were being deposited in caves, summer insolation was at a maximum; minerals ceased being deposited when summer insolation was at a minimum. The positive correlation, they say in the May 24 SCIENCE, "lends support to the astronomical theory of climatic change."