behavioral sciences notes

PSYCHOLOGY

The cement in marriage

Marriage is likely to be stable if man and wife complement each other in three distinctive areas: giving and receiving help, sociability and sexuality.

These are the preliminary results of a two-year study of 100 couples, half of whom were in marital counseling.

If one partner likes to give help, the other should like to receive, says Dr. Irwin H. Cohen, psychologist with the Veterans Administration Hospital in Denver. Two helpers are likely to frustrate each other while two receivers leave each other dissatisfied.

But with sociability and sexual needs, partners are complementary if they are alike. It does not seem to matter, says Dr. Cohen, if the couple is relatively unsociable or disinterested in sex, so long as both feel the same way.

Two other dimensions, though less important, were still related to marriage stability. An aggressive partner who likes to criticize should be paired with someone who needs to take blame. On the need for independence, likes are complementary. Putting the five dimensions together, the Denver study found a "very real and strong difference" between those in counseling and those with stable marriages. The index, however, cannot now be used to predict stability for individual couples.

ANTHROPOLOGY

Cuna Indians face extinction

The Cuna Indians, located in remote corners of Colombia, are dying of malnutrition, tuberculosis and other ailments. A census taken in Colombia's Darien area found 178 surviving Cunas. They have a life expectancy of 25 years.

In an effort to save the tribe, the Colombian Anti-Tuberculosis League plans to send a nurse to the settlements and, if possible, a doctor "to at least save the children."

Cuna Indians are known for their finely carved redwood figures, necklaces and colored cotton cloth, called molas. But despite the market for the cloth and artifacts, organizations dealing in Indian handicrafts have done little to aid the Cunas in broadening distribution.

The Cunas live in a remote location, difficult to reach, and have no financial resources to pay for medical help.

PSYCHOBIOLOGY

Hibernation improves learning

Hibernation appears to amplify a squirrel's learning capacity for several days following deep sleep, report four Yugoslav scientists at the Institute of Pathological Physiology in Belgrade.

The same scientists say they have unpublished work showing large increases of brain RNA and protein in animals aroused from hibernation—further evidence supporting the theory that memory traces are encoded in macromolecules.

Some 18 ground squirrels caught in September and trained to run a maze in the spring after 32 days of hibernation learned the task faster than a control group which did not hibernate. Training and testing lasted 12 days. The Yugoslavs attribute the improved learning either to the beneficial effects of long rest on the brain or to its increased chemical richness following hibernation.

Squirrels trained in the fall, however, remembered their maze whether or not they had been allowed to hibernate—indicating that hibernation has little or no effect on already-established memory, despite the fact that brain electrical activity almost ceases during that period.

Drs. Lj. Mihailovic, B. Petrovic-Minic, S. Protic and I. Divac report the work in the April 13 issue of NATURE.

PSYCHOSOMATICS

Many asthma attacks psychological

Asthma attacks appear to be psychologically controlled in a good number of cases.

Of 40 patients who volunteered to take part in a State University of New York experiment, 19 developed asthma symptoms after breathing the mist of a salt solution. They were told the mist contained allergens, such as pollen, dust or animal dander. Twelve of the reactors got full-blown attacks including wheezing and shortness of breath—all of which disappeared immediately when the patients took what they thought was an asthma drug. Actually it was the salt mist again.

Eugene R. Bleecker, a medical student who did the work with three faculty members from Downstate Medical Center, then tried patients with bronchitis or tuberculosis and persons with no respiratory disease. None reacted to the salt mist though they were told it would irritate lungs.

The asthma patients who did react even experienced an increase in symptoms when given a drug commonly used to combat asthma, but advertised by Dr. Bleecker as an allergen.

The other half of the asthma patients remained unaffected by these various subterfuges.

Psychological asthma attacks are somehow controlled by the brain through the vagus nerve. When that nerve was blocked with a drug, the attacks stopped.

ANTHROPOLOGY

Mayans come to California

Two Maya Indians from Mexico are raising crops of beans, corn, squash and chili by traditional Indian methods in an experimental anthropology program at the University of California, Irvine.

The two Indians, who speak Tzeltal, a language descended from ancient Mayan, have been assisting anthropology professor Duane Metzger with an undergraduate class in Mayan culture.

The Indians have been living and tending their crops at an old tenant farm on the 1,500-acre Irvine campus, where students can study their work methods, customs and language. In return, the university is giving them Spanish lessons.