study at the Psychonomic Society annual meeting in Washington.

The children were asked to rank in order their five favorite relatives and five favorite friends. The youngsters were then given hypothetical danger situations—such as the leaping tigers—for each friend-kin pair.

"The results of the study did not fully support the sociobiological argument of kin selection as an underlying biological mechanism mediating altruistic behavior," reports Ginsburg. In fact, up to the age of 6, children more often (52 percent of the time) chose to save or help a friend rather than a relative. "There was absolutely no pattern to the decision making," Ginsburg adds. "Moms, dads and siblings were thrown to the wolves as often as cousins or other distant relatives."

In marked contrast, children older than 6 opted for saving a friend only 14 percent of the time; in the 9 and 10 year olds, that percentage dropped to near zero. "Of the 45 children in the 6 to 10 year age range, only three preferred friend over kin in three or more of the five hypothetical danger situations presented," Ginsburg reports.

However, 13 of the 25 children younger than 6 responded in the majority of stiuations in favor of the friend. When asked why, a "significant number" of the youngsters answered, "Because my friend is little"—the implication being that "Mom or Dad would be better able to fend for themselves, even though each situation was inescapable," says Ginsburg.

The results suggest, particularly to opponents of sociobiology, that "devotion to kin is a culturally acquired process, and as such has little to do with any presumed biological origins of altruism," Ginsburg says. "They might also note that the age of the shift occurs at a time when children are entering an expanded social milieu—elementary school—adding further to the claim that loyalty to kin is a learned, reinforced process of childhood socialization and is not a biological phenomenon."

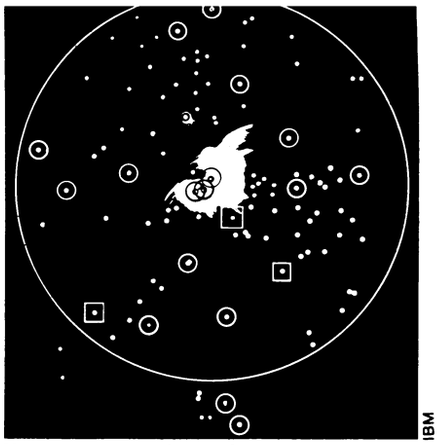
Sociobiologists, on the other hand, might point to the explanation of the friend's "littleness" as an indication that "small children possess physical features ... that release caring and aid-giving on an innate basis, and that this factor temporarily overrides kin selection," reasons Ginsburg. Pro-sociobiologists might also argue that kin selection doesn't really take effect until the approach of pubescence. "As the possibility of one's own genes being placed into succeeding generations nears, perhaps only then does the biological link between kinship and altruism become manifest," he says.

"Whatever the case, these results demonstrate that blood and water have nearly the same consistency early in the life span. It takes about six years of fermentation before blood truly becomes thicker than water," Ginsburg told his colleagues. □

Cloud collapsing, stars forming

Spectroscopic studies of celestial bodies can tell astronomers what chemical substances are present in them and also if those substances are moving, but not necessarily which way they are moving. For example, studies of the gas cloud associated with the Orion nebula indicate that the gas is moving, but are ambiguous about the direction. Is the motion an inward collapse of the cloud, or is it local turbulence? The controversy is important because astronomers think the Orion cloud is a place where new stars are forming, and the usual theory of star formation requires a collapsing cloud.

Evidence that such a collapse is taking place is presented in the Nov. 1 ASTROPHYSICAL JOURNAL by Frederick W. Fallon of the University of South Florida, Humberto Gerola of IBM and Sabatino Sofia of NASA. They measured the proper motions (motions across the sky) of 140 young stars in the neighborhood of the cloud. They reasoned that if those stars are really in the cloud (not in front of or behind it) and have formed recently from the cloud's matter, then the stars should be partaking of the cloud's motion. The measurements used 65 stars near the group of young stars as references in a plate-overlap technique recently made available by computers.



IBM

Young stars, circles; references squares.

The results show that the young stars do appear to be falling toward the middle of the cloud, the inside ones moving faster than the outside ones as the kinematics of such a collapse requires. The surprise is that even stars far from the center of the cloud appear to be related to it and forming from its matter. The usual theory would not have expected to find stars forming in such tenuous parts of the cloud, but only in its denser inner parts. The answer to why stars form in the outer parts may involve the chemistry of the cloud, and Gerola is experimenting with simulations of reactions that may take place between molecules known to be in the cloud. □

Lasker awards to five Europeans

Development of diagnostic ultrasound and research into prostaglandins (local hormonal regulators in the body) have brought Albert Lasker Medical Research Awards for 1977 to four Swedish scientists and to one British scientist.

The two co-recipients of this year's $15,000 Albert Lasker Clinical Medical Research Award are C. Hellmuth Hertz, head of the Department of Electrical Measurements of the Lund Institute of Technology in Lund, and Inge G. Edler, associate professor of medicine at University Hospital in Lund. Hertz has been recognized for pioneering the development of ultrasound technology, which has resulted in noninvasive methods of diagnosis in obstetrics, gynecology, urology, cancer and other areas (SN: 6/4/77, p.360). Edler has been recognized specificially for developing ultrasound diagnosis of heart abnormalities. Ultrasound is probably the most important noninvasive tool for performing heart diagnosis since the electrocardiograph (EKG).

The three co-recipients of the 1977 Albert Lasker Basic Medical Research Award are K. Sune D. Bergstrom, professor of chemistry at the Karolinska Institute in Stockholm, Bengt Samuelsson, chairman of chemistry at the Karolinska Institute, and John R. Vane, group research and development director at the Wellcome Research Laboratories in Beckenham, England. Bergstrom has been cited for his classic achievements in isolating prostaglandins. According to the Lasker jury, "Dr. Bergstrom is the acknowledged world leader in the prostaglandin field." Samuelsson has been honored for his exceptional accomplishment in explaining the biosynthesis of prostaglandins, analyzing their metabolism and developing new methods for their measurement. Vane is a winner for his discovery of prostaglandin X, now renamed prostacyclin, whose major action is to prevent formation of blood clots that may lead to heart attack and stroke.

In 1970, the first international meeting on prostaglandins was held at the New York Academy of Sciences. Many scientists prophesied then that these messengers, which do an incredible number of things in the body, would become the miracle drugs of the 1970s, just as steroid hormones were the drug finds of the 1950s and 1960s (SN: 10/10/70, p.306). Indeed, a number of prostaglandin drugs have been developed since then and are already clinically available or looking promising, notably in the areas of human and livestock reproduction, stomach ulcers and arteriosclerosis (SN: 9/20/75, p. 188).

Numerous Lasker recipients have gone on to win Nobel Prizes. This year was no exception. All three Nobel medicine winners had previously won Laskers. □