

Behavior

From the Conference on the Human-Animal Bond at the University of Minnesota in Minneapolis

Snake owners aren't weirdos

The kind of pet you own may say something about your personality, Aline H. Kidd, a psychologist at Mills College in Oakland, Calif. has found.

Kidd wanted to learn what types of persons prefer which kinds of pets. First she screened a large number of pet owners to locate persons who chose to own only dogs, cats, horses, birds, turtles or snakes. She then selected 25 male owners and 25 female owners in each kind of pet owner group. She then gave all the subjects a list of adjectives—outgoing, introspective, assertive, nurturing and so forth—with instructions to check the ones that personally applied. A computer was used to analyze the results from all the subjects and to determine how the personality traits of one kind of pet-owner group compared to the traits of another kind of pet-owner group and whether traits among the various groups differed depending on sex.

Both male dog owners and male horse owners are aggressive and dominant, the study found. Female dog owners, like female horse owners, are extremely nurturing. (Females who own horses are not the same as those who show horses, however, Kidd points out. Another researcher, she says, has found that females who show horses tend to be aggressive and dominant.)

Both male and female cat owners are autonomous, less people-involved than dog owners. Both male and female bird owners are sociable and chatty. But while male owners are only moderately aggressive and dominant, female bird owners are excessively so. As for male and female turtle owners, they are upwardly mobile, step-at-a-time people, capable of routine. And as for male and female snake owners, they aren't "weirdos," as Kidd had expected. However, they are novelty-seeking, she says, and "would do well in a job where you never know what is going to happen."

If you want a friendly cat

Most pet care books advise people to start handling kittens at seven weeks of age. But if you want an especially friendly cat, you should start handling it by three weeks of age, says Eileen Karsh, a psychologist with Temple University in Philadelphia who has been studying the socialization of cats. (Karsh is also a cat lover; she has 11 cats.)

Shortly after birth, 26 kittens were randomly assigned to one of three treatment groups. The first group received handling from 3 to 14 weeks of age, the second from 7 to 14 weeks of age and the third none at all through 14 weeks of age. The handling procedure consisted of an experimenter holding a kitten on his or her lap and stroking or petting it for 15 minutes daily. Each kitten was handled by four experimenters on different days. The three groups were then tested for their friendliness toward people in two ways—first by how long they stayed with an experimenter when not restrained and how long it took them to reach an experimenter.

The group that had been handled from 3 to 14 weeks of age was found to stay twice as long with an experimenter when not restrained as was the group that had not been handled at all. The group that had been handled from 7 to 14 weeks of age stayed a shorter time than the group that had been handled at an earlier age, yet a longer time than the nonhandled group.

Similarly, the group that had been handled from 3 to 14 weeks took much less time to reach an experimenter than did the nonhandled group. On the other hand, the group that had been handled from 7 to 14 weeks of age took about the same time to reach an experimenter as did the nonhandled group.

The amount of handling a kitten receives also seems to influence how friendly it's going to become, Karsh found in another experiment. Kittens handled 40 minutes a day in the lab became more sociable than kittens handled 15 minutes a day in the lab, and kittens reared at home became the most sociable of all.

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Astronomy

Telescopes on the ground . . .

Only 5 years and \$45 million stand between the University of Texas at Austin and the largest reflecting telescope in the world. Recently, the university's regents unanimously gave the go-ahead for construction of the 300-inch, 100-ton telescope to be built near McDonald Observatory in western Texas. If the telescope had been built according to classical telescope specifications, it would have weighed nearly 10 times as much and been 10 times as costly. Modern design technology, however, allowed a more lightweight construction utilizing a thin (5-inch thick) mirror, thereby reducing costs.

According to Harlan Smith, director of McDonald Observatory, when operational (1989 is the predicted date for dedication), the light-gathering capabilities of the 300-inch telescope will make it the best in the world for spectroscopic work, high optical resolution of small objects and imaging in the infrared region of the light spectrum.

The mirror's excellent resolution will be aided by "rubber" mirror technology (SN: 3/5/83, p. 148), whereby a feedback system controls pistons attached to the back of the mirror to continually change its shape, thereby compensating for mirror flaws and atmospheric distortions. The earth's atmosphere limits the resolution of all ground-based telescopes in normal operation to not much better than 1 second of arc. (A quarter placed 2 miles from a viewer would subtend about a second of arc.)

With a technique called "speckle interferometry" (SN: 6/26/82, p. 426), however, astronomers at the University of Texas hope to improve the resolving power of the planned reflector to two-hundredths of an arcsecond for small fields of view. Since this technique is even more powerful for large mirrors, Smith says the 300-inch should be the best telescope in the world for resolving small systems such as binary stars.

. . . and in the air

Although delays due to difficulties with the powerful Space Telescope originally planned for space-shuttle launching in 1985 have pushed back its expected launch date over a year, there is some good news to report.

Problems in securing the primary mirror for grinding and polishing, and developing facilities for coating it, have been resolved, says Charles Redmond, National Aeronautics and Space Administration (NASA) spokesperson for science applications. The result is the best mirror ever prepared, now hanging upside down in an ultra-clean room in Danbury, Conn. Scientists are now certain that the thin dust film collecting on it can be removed easily with gentle puffs of an inert gas. Furthermore, says Redmond, obstacles in the development of the latches that will clamp scientific instruments to the telescope body have been, for the most part, resolved.

But most importantly, worries over the Space Telescope's fine guidance sensors have diminished since they are operating now near the original design specifications. The sensors will locate, lock into and track within their crosshairs two guide stars so that the telescope can remain pointed at an astronomical object of interest for long periods of time. Vibrations in the rate gyros, which will sense spacecraft motion, and in the reaction wheels to be used in turning the spacecraft, threatened to hamper the Space Telescope's ability to meet the original stability requirement of no more than 7 milliseconds of arc drift in a 24-hour period. According to Arthur J. Reetz, development engineer for the Space Telescope, since the sensors are now operating to within one milli-arcsecond of that goal, there should be no need to relax the stability specifications to a previously proposed limit of 12 milli-arcseconds. With its improved pointing stability and excellent mirrors, the Space Telescope should achieve final optical image resolutions near one-tenth of an arcsecond, about 10 times better than its best ground-based cousin.

75