evokes Kennedy's broader philosophy of individual freedom. Ultimately, like Tiger Woods, he favors racial self-identification: "People should be able to determine for themselves what their race is." He backs racial mobility as well, and his book includes a chapter on "passing." Regarding intimate relationships, "I want individuals to be able to express themselves and do what they want," he says. "I'm attacking customs of racial separateness enforced by the government *and* those imposed by groups—white, black, or anybody else. Affection should be able to display itself free of wrongful impediments, including racial ones. My most basic position is, I'm for love—put me in the love camp." —CRAIG LAMBERT

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FURRY LOGIC

Best Friend Bests Chimp

A CHIMPANZEE enters a room where food is hidden in one of two opaque containers. A human gazes at the container that hides the food. Reaches for it with outstretched arm. Marks the container with a wooden block. The chimp doesn't get the message, even though chimpanzees are one of *Homo sapiens*' two closest extant primate relatives and might be expected to figure it out. Biological anthropologist Brian Hare and colleagues tried this game with 11 chimps, and only two of the brainy apes used the conspicuous cues to find the food.

Dog owners may not be surprised to learn that nine of 11 dogs in the same situation correctly read the human signals and found the food. A control exercise established that odor was not a cue in either trial.

A wolf raised by humans enters the room. The experimenter gazes at the baited container. Points at it. Even taps it. The wolf doesn't perform above chance on any of these cues. Seven dogs and seven wolves take a turn. The dogs find more food than the wolves in response to each of the three visual cues, even though wolves are dogs' closest relatives. Recent research by Peter Savolainen and colleagues at the Royal Institute of Technology in Stockholm convinces them that all dogs, from the Mexican hairless to the komondor, from the Scottish terrier to the borzoi, descended from a very small number of East Asian wolves who lived roughly 15,000 years ago.

A puppy dog enters the room. It, too, finds food better than chimps and wolves. Hare, a fifth-year graduate student at Harvard whose work was largely funded by the Max Planck Institute in Germany, gazed, and then gazed and pointed, with 32 puppies, varying in age from nine to 26 weeks, including puppies who had had little contact with humans. The ability of a dog to perceive the meaning of his gestures is innate, he concludes, not learned over the course of a dog's life.

Reporting their findings in *Science* magazine last fall, Hare and his team concluded, "These findings suggest that during the process of domestication, dogs have been selected for a set of social-cognitive abilites that enable them to communicate with humans in unique ways." Of the wolves who hung around a campsite hoping to snare food from the scrap heap, perhaps the one most adept at fathoming human gestures was the one most likely to prosper. Perhaps an early wolf-dog helped a human to hunt and earned a place by the fire that way.

Hare believes that the dog gained an evolutionary edge by learning to understand human cues, that humans selected for breeding the dogs that had this skill. But possibly Fido's canniness is simply a byproduct of domestication, not a deliberate human goal.

Hare hopes to explore the byproduct hypothesis in Siberia this summer. A research group at the Institute of Cytology

Anthropologist Brian Hare, whose field is the evolution of human cognition, with consultant Milo

Photograph by Stu Rosner

and Genetics in Novosibirsk, building on work of the late geneticist Dmitry K. Belyaev, has bred silver foxes for 45 years, selecting not for trainability but for tameness. "When the kits were four weeks old," says Hare, "a researcher would stand in front of their cage. The kits who came forward were saved and eventually allowed to breed, the ones who moved away were culled." The foxes have indeed become tame—enough to be house pets. (They changed in other ways, too, as dogs did in their domestication. Their fur changed color, their brains grew smaller, they became more gracile, and their ears got floppy. Darwin observed that "not a single domestic animal can be named which has not in some country drooping ears," a feature not found in any wild animal except the elephant, the institute's Lyudmila Trut has noted.)

Have the Belyaev silver foxes acquired a doglike ability to read human cues? If so, the byproduct hypothesis will be strengthened, because they were not selected for trainability. Hare wants to try the baited-container game on these unique foxes, which have become calmer in domestication than their wild ancestors, he says, just as dogs did. Perhaps that will help them discern the meaning of his gazing and pointing and tapping. The foxes may be better at finding the hidden food than chimps and wolves, but will they do as well as man's best friend? Hare has his money on the dogs.

—CHRISTOPHER REED

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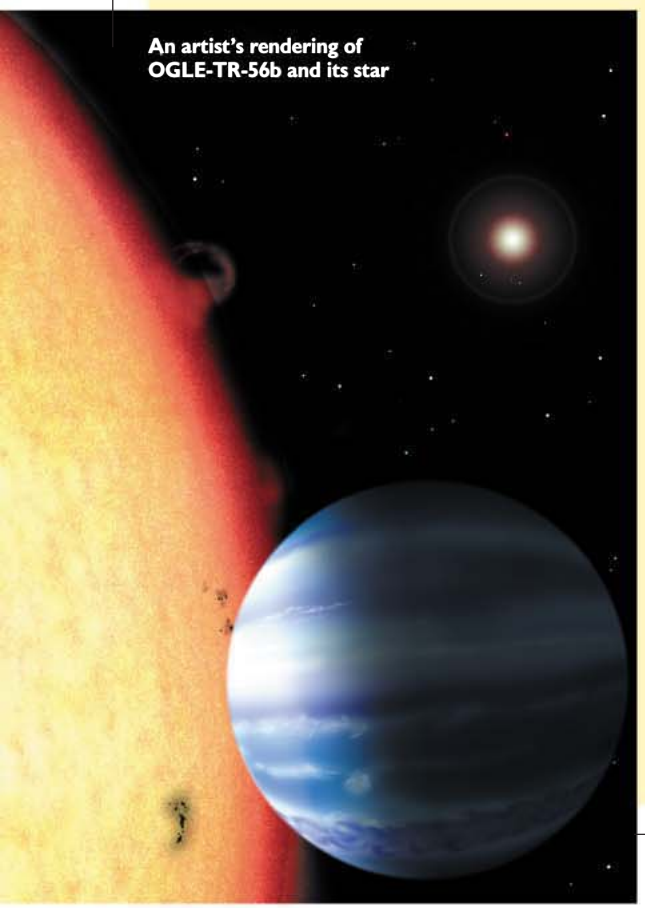
BOYS' NIGHT IN

Testosterone Dips after Vows

BEER-GUZZLING frat boys, catcalling construction workers, and muscle-bound professional wrestlers who prance like peacocks in the ring are often castigated for having too much testosterone. Fathers and husbands who spend hours with their families or spouses are rarely jeered for having too little. Now, research into testosterone's effect on behavior suggests that married men may experience a unique biological tradeoff that decreases their testosterone levels—thus squelching some of their more flamboyant behaviors and allowing caring and nurturing traits to emerge.

In many animal species, males spend much time locked in testosterone-fueled activities such as fighting and mating. Human males do all this, but also invest in long-term relationships and provide decades of care for their young. This additional dimension puts humans in a special category. "In chimps you don't find that commitment," says Peter B. Gray, a graduate student in anthropology. "So the ques-



An artist's rendering of OGLE-TR-56b and its star

A HARD RAIN'S GONNA FALL

Far-out Sagittarian

Five thousand light years from Earth, in the constellation Sagittarius, astronomers have discovered a planet by observing its direct transit in front of its star. This is a first. All of the 100 or so known extrasolar planets orbiting normal stars have been discovered using indirect evidence, such as the "wobble" their gravity produces on nearby celestial bodies (see "Distant Planets," July-August 2000, page 22, and "Orbiting Other Suns," September-October 1998, page 16). At the Harvard-Smithsonian Center for Astrophysics, however, a group led by Cabot associate professor of astronomy Dimitar Sasselov identified planet OGLE-TR-56b by observing that light from its star dimmed minutely when the planet passed across the star's face (see http://cfa-www.harvard.edu/press/pr0301.html). Sasselov compares the effect to "a mosquito passing in front of a searchlight 200 miles away." The world's largest optical telescope, the 10-meter Keck I telescope in Hawaii, confirmed the finding.

The complex new technique that found OGLE-TR-56b—at a distance 20 times greater than that of any previous comparable body—vastly extends the field of search for extrasolar planets, enlarging it from 40,000 candidate stars to 100 million or more. OGLE-TR-56b, a gaseous body, is larger than Jupiter, yet orbits only 2 million miles away from its star. (Earth is 93 million miles from the Sun.) Hence its years last only 29 hours, while the surface temperature rises to 3000 degrees Fahrenheit, which may cause unusual weather: rain droplets not of water, but iron.

—*Craig Lambert*

Illustration courtesy Harvard-Smithsonian Center for Astrophysics