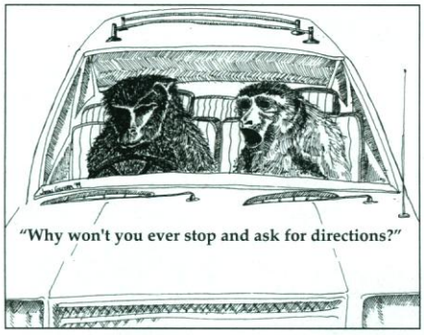
Extra Neurons For the Chase?

Contrary to prevailing belief, men have bigger brains on average than do women even after accounting for the difference in body size, according to a provocative new report in the current *Journal of Human Evolution*. And this difference is echoed in monkeys—all of which suggests an evolutionary rationale related to males' navigational needs as roamers of territory, whether in search of mates or game.


"Why won't you ever stop and ask for directions?"

So says anthropologist Dean Falk of the University at Albany of the State University of New York, who with her team analyzed data on 414 male and 390 female human brains. Instead of following the usual procedure of dividing brain size by body size, they compared males and females of the same body weight. Falk says she was "surprised" to find that "at any body weight, men have bigger brains than women." For example, at a weight of 60 kilograms, Caucasian women's brains weigh about 1256 and men's about 1373 grams. The researchers went on to look at comparable data for 39 male and 44 female rhesus monkeys, a species in which males leave their groups at puberty in search of mates. There they found a pattern "remarkably consistent" with that seen in humans.

Because human males outscore females on visual-spatial tests, Falk's team suspects that in both men and monkeys all those extra male neurons may be dedicated to navigational skills. There's more evidence in the works: Falk's graduate student John Redmond has found no sex differences in brain size among gibbons, where males are monogamous stay-at-homes.

The conclusions bolster similar findings reported in 1992 by zoologist Dave Ankney of the University of Western Ontario, who found the same human brain size difference and who believes the male surplus is for "dynamic" spatial tasks, as in football passing.

Other scientists say the findings make sense. Anatomist Jim Cheverud of Washington University School of Medicine in St. Louis says the sex difference in human brains "was not something that I'd realized," but that Falk's observations fit with the fact that in primates, most male features are larger than females'.

ESP Road Test

Billed as "the world's largest ever test of psychic ability," a computerized coin toss will make the rounds of fairs, shopping centers, and museums in Britain over the next year. But even if the test gets results, what's being measured won't be clear.

Launched last month during National Science Week, the "Mind Machine," the brainchild of University of Hertfordshire psychologist Richard Wiseman, has a computer that electronically flips a coin. Viewers touch the screen to predict heads or tails. Wiseman, who expects to collect data from 250,000 tosses, says this "will allow us to determine ... with a huge degree of certainty ... whether people really can influence computers."

Or something. Wiseman acknowledges that nonrandom results might point either to psychokinesis (the mind influencing the computer) or to precognition (the mind anticipating the computer). "This is always a problem with this type of parapsychology," he says. "However, I would be happy enough to demonstrate any effect at all."

Early Siberian Accouchement

Perhaps 2000 years ago an unknown person in the Altai mountains in southern Siberia carved this petroglyph of a woman giving birth beneath a bull. "Birthing women are frequently represented together with large animals such as bulls or elk," says photographer Gary Tepfer. The image symbolizes fertility and well-being, he says. Tepfer braved cold, wind, and stark lighting conditions to capture remnants of ancient Altai mountain cultures that began 4000 years ago before the Bronze Age. His photos of stone altars, mounds, and contemporary mountain inhabitants are on display at the National Academy of Sciences in Washington, D.C., 6 April through 30 June.

Cheers for Chocolate

The list of sin-free foods keeps growing. First red wine, then coffee and tea were pronounced potentially beneficial in moderation. Now, studies presented at last week's American Chemical Society meeting in Anaheim, California, suggest that another guilty pleasure—chocolate—has its salubrious side.

The idea that chocolate may have some health benefits is plausible, says Joe Vinson, a chemist at the University of Scranton in Pennsylvania. That's because it comes from plants, which are prolific producers of polyphenols, antioxidant compounds believed to mop up free radicals that can damage DNA. But what is a bit of a shock, says Vinson, is that chocolate is chock-full of such compounds. He found that a single candy bar's worth of milk chocolate—40 grams—harbors more than 300 milligrams of polyphenols, equivalent to a day's worth of fruits and vegetables. If that bar is dark chocolate, it holds 2 days' worth. Chemist Harold Schmitz of the M&M Mars candy company took the work a step further, showing that a family of flavonoids, a subclass of chocolate polyphenols, helped neutralize low density lipoprotein or "bad cholesterol" in the test tube.

So should chocoholics stop worrying and indulge? Well, no, says Vinson, because chocolate is still "high in saturated fats and calories." But "a little chocolate may even be good for you."

CREDITS: (TOP) JOHN GUYER; (BOTTOM) GARY TEPFER