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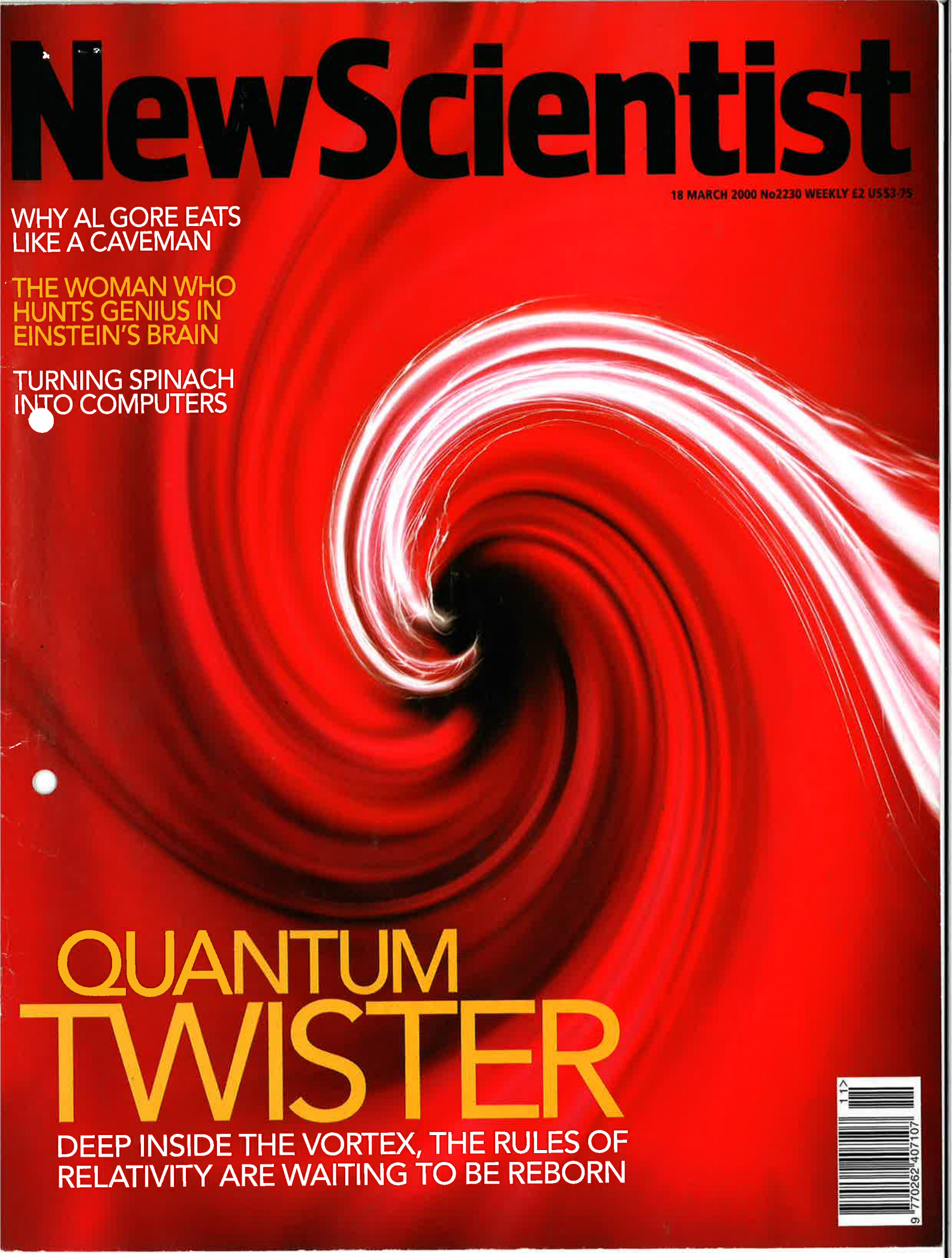
WHY AL GORE EATS LIKE A CAVEMAN

THE WOMAN WHO HUNTS GENIUS IN EINSTEIN'S BRAIN

TURNING SPINACH INTO COMPUTERS



QUANTUM TWISTER

DEEP INSIDE THE VORTEX, THE RULES OF RELATIVITY ARE WAITING TO BE REBORN

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No, after you

Owl chicks are blessed with impeccable manners

BARN owls have the politest children. Instead of badgering their parents and fighting over the next meal, chicks negotiate with each other so the hungriest can eat first.

Most scientists have assumed that nestlings cry out purely to attract the attention of their parents. But in many bird species, chicks call all night, even when the parents aren't around. Zoologist Alexandre Roulin wondered whether these nestlings are actually communicating with each other.

So Roulin, of the University of Bern, Switzerland, and his colleagues chose two siblings at random from broods of barn owls (*Tyto alba*) and gave one of the chicks dead mice to eat during the day. They found that the hungry nestling cried far more often during the following night than the chick that had eaten. But once the hungry chick had been fed, its sibling started to beg more.

In another experiment, he found that the more siblings there were in a nest, the less the chicks called out. It's not what you'd expect if the chicks were all trying to shout each other down.

The team think the chicks don't beg when they only have a small chance of getting the food. "If one nestling is more hungry than the other, the value of the food for it is higher," explains Roulin. "A hungry nestling will fight physically for the prey."

In this scenario, he says, it's not worthwhile for the less hungry nestling to compete for the food it is unlikely to win. So instead, the chicks monitor each other's hunger levels by the intensity of each other's cries. The upshot of these negotiations is that the less hungry birds back down, electing to save energy and wait their turn.

Becky Kilner, a zoologist at Cambridge University, says the work is an interesting new approach. "Nobody has really looked before at the situation of nestlings communicating in the absence of the parents," she says. She wonders whether the chicks of other species behave in the same way. **Joanna Marchant**

Jane Burton/Bruce Coleman

Taking turns: the hungriest feed first

Source: *Proceedings of the Royal Society B* (vol 267, p 459)

Early debut

Planet Earth

LAND plants made their big entrance on Earth some time during the Cambrian, tens of millions of years earlier than the fossil record had led scientists to believe.

American researchers have found fossilised plant spores in rocks from the Grand Canyon and Tennessee dating back to between 510 and 500 million years ago. The oldest plant traces found before this were similar fossil spores from the middle Ordovician, 470 million years ago. The Cambrian spores cluster in groups of two or four, a rare feature found in primitive modern plants like the liverwort, says geologist Paul Strother of Boston College's Weston Observatory in Weston, Massachusetts. He presented the findings this week to a Geological Society of America meeting in New Brunswick, New Jersey.

Strother's research shows that early plants were spreading in moist regions on the land at the same time that animal life—then still confined to water—was rapidly diversifying in the Cambrian explosion that produced virtually all major modern groups.

Other palaeobotanists are intrigued. "The big question is what they are," says Patricia Gensel of the University of North Carolina in Chapel Hill. Genetic studies indicate that land plants evolved from green algae. **Jeff Hecht**