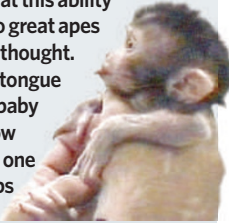


ZOO NEWS

Making faces

Italian researchers have found that infant rhesus macaques can imitate facial movements, suggesting that this ability isn't unique to great apes as previously thought. Sticking your tongue out all day at baby monkeys? Now that has to be one of the best jobs in the world.



Live fast, die young

The most distant galaxy isn't the only scientific record notched up this week (see page 128). Guinness World Records has confirmed that the coral reef pygmy goby (*Eviota sigillata*), discovered by Australian researchers, is the vertebrate with the shortest known lifespan — a fleeting 59 days.

ON THE RECORD

“Experience your own choice of a dazzling and varied array of gourmet food.”

Invitation for the official party of the 10th International Congress on Obesity in Sydney.

“To vomit in space is not my idea of a good time.”

Star Trek actor William Shatner turns down British entrepreneur Richard Branson's offer of a real space flight.

OVERHYPED

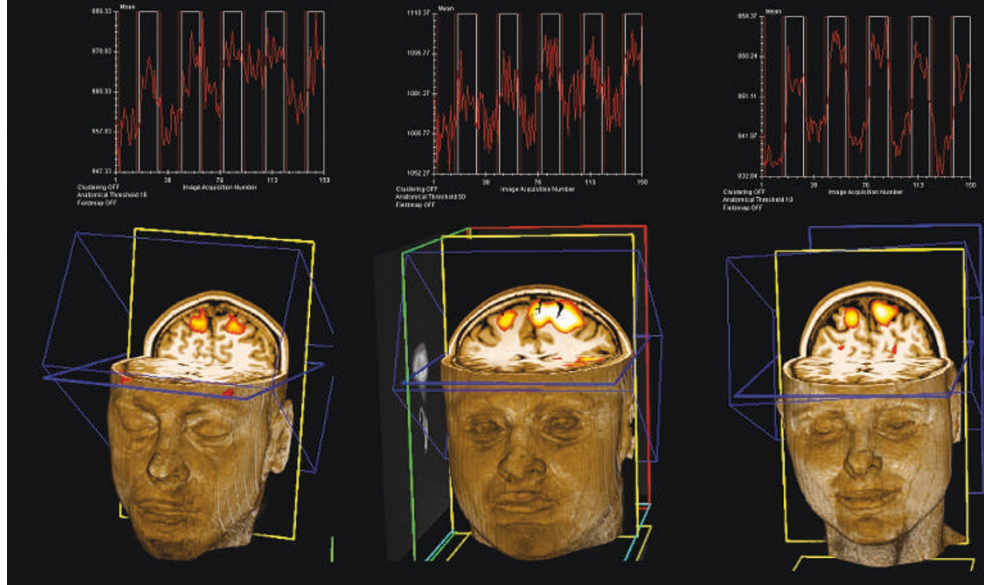
Last week, news sources worldwide reported that a parapsychologist at Trinity College, Cambridge, had proved the effect of telephone telepathy — in which a subject ‘knows’ who is calling before they answer the phone.

But the researcher, Rupert Sheldrake, is not employed by the university. Instead, he gets a grant from the Perrott-Warrick fund for psychic research, set up at Trinity about a century ago. The finances are still looked after by the college, but it has no connection with the committee that spends the money.

Martin Rees, master of Trinity, says it is inappropriate to describe Sheldrake's affiliation as Trinity College. “I think he's a former fellow of Clare, which should have undiluted credit,” he says.

Sources: PLoS Biol., UPI

“Imagine playing tennis...”



Brain areas activated in healthy volunteers (above) were identical to those in a vegetative patient.

‘Vegetative’ patient shows signs of conscious thought

The question of whether outwardly unresponsive patients may in fact be aware of their surroundings is one of the most heated debates in clinical neuroscience, with huge implications for the way such patients are diagnosed and treated. In a remarkable study published last week, researchers report that a patient who meets all the criteria of being in a ‘vegetative state’ can perform mental tasks on request. But the case highlights the difficulty of probing the mental state of an individual who cannot communicate, and of drawing any general conclusions about his or her condition.

Adrian Owen of the Medical Research Council's Cognition and Brain Sciences Unit in Cambridge, UK, and his colleagues used functional magnetic resonance imaging (fMRI) to scan the brain of a 23-year-old woman left in a vegetative state after a car accident in July 2005. Such patients do not respond to their surroundings, and doctors have always assumed that they are completely unaware of them. Previous brain-scanning studies have failed to detect more than reflex reactions to stimuli such as sound or pain.

Owen and his colleagues now show that their patient can respond to verbal requests to

picture herself either playing tennis or walking around her house. Each activity produces a different pattern of brain activation, and these are strikingly similar to those of healthy volunteers (A. M. Owen *et al. Science* **313**, 1402; 2006). The decision to comply with the experimenter's instructions proves awareness, says Owen. “What we've developed is a method for detecting when someone is aware in the absence of other clinical evidence.”

But what that ‘awareness’ means is still up for debate. For example, Paul Matthews, a clinical neuroscientist at Imperial College London, argues that the brain imaging technique used cannot evaluate conscious thought; fMRI lights up regions of brain activity by identifying hotspots of oxygen consumption by neurons. “It helps us identify regions associated with a task, but not which regions are necessary or sufficient for performing that task,” he says.

Matthews argues that the patient's brain could have been responding automatically to the word ‘tennis’, rather than consciously imagining a game. He also points out that in many vegetative cases, the patient's motor system seems to be undamaged, so he questions why, if they are conscious, they do not respond