Monkey brains hear voices

MACAQUES may just seem to be indulging in monkey chatter, but they can distinguish one another’s voices in much the same way as we recognise those of other people.

In the human brain, the “voice region” in the auditory cortex activates when we hear others speak. It had been unclear if the voice region was a specialist adaptation, unique to humans, that evolved with our spoken language skills.

Now Chris Petkov at the Max Planck Institute for Biological Cybernetics in Tübingen, Germany, and colleagues have found that monkey brains also have a voice region.

They played a variety of sounds to seven macaques and used fMRI to detect any brain areas with increased activity. One region, corresponding to a site close to the voice region in the human brain, lit up in response to macaque coos and grunts but was less active when the monkeys heard other animals, thunder or the sound of rain (Nature Neuroscience, DOI: 10.1038/nn2043).

Further tests on one monkey showed that the same brain area was more sensitive to differences between individual macaque voices than to different utterances from one macaque. “This means we may be able to use these monkeys as a model to study ‘voice blindness’, a condition where humans cannot tell people apart by their voices,” says Petkov.