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► **COVER:** 'Navigating the mind' by Kirsten Lee, inspired by the review on p663.



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The division of labour between the two hemispheres and the lateralization of handedness in humans have puzzled researchers for many years. In this issue, Sun and Walsh (page 655) review recent genetic, imaging and neurological evidence on the molecular mechanisms that underlie anatomical and functional asymmetries of the brain. They argue that brain asymmetry results from interplay between intrinsic factors and extrinsic influences, and propose molecular mechanisms that regulate brain (but not body) asymmetry and handedness. For example, asymmetrical distribution of morphogens during neural tube formation seems to be crucial for initiating asymmetrical brain development.

The driving force behind the evolution of brain asymmetries in humans has also been an enduring question. The left-hemisphere dominance for language ability and handedness in most humans seems to be more than mere coincidence. These authors consider evidence that genetic mutations that favoured right-hand dominance might have facilitated the evolution of language, increased brain capacity and overall social cohesion.

Further development of large-scale screening approaches at the genomic level could facilitate the identification of asymmetrically expressed genes in human and non-human mammals, and shed fresh light on the evolutionary mechanisms and regulation of brain lateralization.

Finally, we are delighted to present a Focus issue and accompanying Web Focus on nerve regeneration, which has been produced with the generous support of the Wing for Life Spinal Cord Research Foundation. It is hoped that this joint effort will stimulate debate and foster collaboration among researchers as they endeavour to design effective strategies to improve nerve repair after injury. The Focus issue will be freely available online until the end of January 2007 (www.nature.com/nrn/focus/nerveregeneration).

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