



nature publishing group



► **COVER:** 'Sweet choices' by Kirsten Lee (original photograph by V. Askew), inspired by the Review on p467.



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A little girl enters a sweet shop, eager to spend her pocket money on a bag of sweets. Confronted with the sight and smell of all the different options, she will need to decide which sweets to choose. But what is the neural basis of perceptual decision making? In their authoritative Review on page 467, Heekeren, Marrett and Ungerleider describe which brain regions downstream of the sensory-processing areas are involved in the integration of sensory evidence, the execution of the decision and the monitoring of the decision outcome. They also discuss how human perceptual decision making might differ from that in other primates, and present a working model for the neural system that underlies perceptual decision making in humans.

The basic unit of any functional neuronal network is the synapse. Recently it has become apparent that glutamate receptors are functional components of not only the postsynaptic membrane, but also the presynaptic one. The article by Pinheiro and Mulle on page 423 reviews the function of presynaptic ionotropic and metabotropic glutamate receptors in the regulation of synaptic transmission and, therefore, in overall network activity.

Finally, this issue also features a Progress article by Lichtman, Livet and Sanes (page 417) that discusses the potential application of Brainbow transgenes to analyses of neuronal connectivity and function. This article is also part of a Collection on Neurotechniques, sponsored by Olympus, that accompanies this issue. The articles in the collection and the accompanying web focus (<http://www.nature.com/focus/neurotechniques>) demonstrate how increasingly refined techniques are allowing us to dissect neuronal function in greater detail than ever before.

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