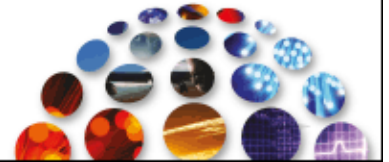


The 2015 Mid-Year *Nature* events Directory is now available!

[Login](#)[Cart](#)Search [Advanced search](#)[Journal home](#) > [Archive](#) > [Review](#) > Abstract

JOURNAL CONTENT

- [Journal home](#)
- [Advance online publication](#)
- [Current issue](#)
- [Archive](#)
- [Web Focuses](#)
- [Article Series](#)
- [Podcasts](#)
- [Posters](#)

Journal information

- [Guide to Nature Reviews Neuroscience](#)
- [Online submission](#)
- [Guidelines for referees](#)
- [About the journal](#)
- [Subscribe](#)
- [Feedback for editors](#)

NPG services

- [Help](#)
- [Authors and Referees](#)
- [Librarian gateway](#)
- [Advertising information](#)
- [work@npg](#)
- [Reprints and permissions](#)

NPG resources

- [SciBX](#)
- [Nature Reviews](#)
- [Nature Cell](#)

Review

Nature Reviews Neuroscience **7**, 523-534 (July 2006) |
doi:10.1038/nrn1931

Decoding mental states from brain activity in humans

John-Dylan Haynes^{1,2,3} & Geraint Rees^{2,3} [About the authors](#)

[top](#)

Recent advances in human neuroimaging have shown that it is possible to accurately decode a person's conscious experience based only on non-invasive measurements of their brain activity. Such 'brain reading' has mostly been studied in the domain of visual perception, where it helps reveal the way in which individual experiences are encoded in the human brain. The same approach can also be extended to other types of mental state, such as covert attitudes and lie detection. Such applications raise important ethical issues concerning the privacy of personal thought.

View [At a Glance](#)

[top](#)

Author affiliations

1. Max Planck Institute for Cognitive and Brain Sciences, Stephanstrasse 1a, 04103 Leipzig, Germany.
2. Wellcome Department of Imaging Neuroscience, Institute of Neurology, University College London, 12 Queen Square, London WC1N 3BG, UK.
3. Institute of Cognitive Neuroscience, University College London, Alexandra House, 17 Queen Square, London WC1N 3AR, UK.

Correspondence to: John-Dylan Haynes^{1,2,3}

Email: haynes@cbs.mpg.de

[top](#)

This issue

- [Table of contents](#)
- [Previous abstract](#)
- [Next abstract](#)

Article tools

- [Full text](#)
- [Download PDF](#)
- [Send to a friend](#)
- [Export citation](#)
- [Rights and permissions](#)
- [Order commercial reprints](#)

Article navigation

- [Author affiliations](#)
- [At a glance](#)
- [Figures and tables](#)
- [About the authors](#)

Search PubMed for

- [John-Dylan Haynes](#)
- [Geraint Rees](#)

open innovation challenges

[New Concepts for Remote Fish Detection](#)

Deadline: Aug 26 2015
Reward: **\$20,000 USD**

The ability to track individual or groups of fish is central to efforts to recover threatened and e...

Biology
Nature Communications
Nature Medicine
Nature Neuroscience
Nature Reviews Drug Discovery
Nature Reviews Molecular Cell Biology
Neuroscience Gateway
Nature Reports Stem Cells
RNAi Gateway
Structural Genomics Knowledgebase
Scientific Data

NPG Journals

by Subject Area

Chemistry

Chemistry
Drug discovery
Biotechnology
Materials
Methods & Protocols

Clinical Practice & Research

Cancer
Cardiovascular medicine
Endocrinology
Gastroenterology & Hepatology
Methods & Protocols
Pathology & Pathobiology
Urology

Earth & Environment

Earth sciences
Evolution & Ecology

Life sciences

Biotechnology
Cancer
Development
Drug discovery
Evolution & Ecology
Genetics

MORE ARTICLES LIKE THIS

These links to content published by NPG are automatically generated.

REVIEWS

The neural systems that mediate human perceptual decision making

Nature Reviews Neuroscience Review (01 Jun 2008)

Interpreting fMRI data: maps, modules and dimensions

Nature Reviews Neuroscience Review (01 Feb 2008)

[See all 28 matches for Reviews](#)

NEWS AND VIEWS

I can see what you see

Nature Neuroscience News and Views (01 Mar 2009)

Imaging orientation selectivity: decoding conscious perception in V1

Nature Neuroscience News and Views (01 May 2005)

RESEARCH

Decoding the visual and subjective contents of the human brain

Nature Neuroscience Article (01 May 2005)

[See all 27 matches for Research](#)

Noninvasive Biomarkers for Liver Fibrosis

Deadline: Aug 17 2015

Reward:

\$50,000 USD

Liver disease is a continuum of diseases from viral or toxic insults leading via fibrosis to late s...

[More Challenges](#)

by:

naturejobs

Postdoctoral Research Associate

Benaroya Research Institute at Virginia Mason (BRI)

Postdoctoral Research Associate

Benaroya Research Institute at Virginia Mason (BRI)

[More science jobs](#)

[Post a job](#)

natureevents

Champalimaud Neuroscience Symposium – Perspectives on Social Behaviour
16 September 2015 – 19 September 2015

Lisbon, Portugal

The 9th Annual Pain and Migraine Therapeutics Summit
23 September 2015 – 24 September 2015

Washington, DC, United States

[More science events](#)

ADVERTISEMENT

Immunology
Medical research
Methods & Protocols
Microbiology
Molecular cell biology
Neuroscience
Pharmacology
Systems biology

Physical sciences

Physics
Materials

by A - Z Index

npj | Regenerative
Medicine

Open for
submissions

Publishing high
quality research
on ways to help
the human body
repair, replace
and regenerate
damaged tissues
and organs.

EDITOR-IN-CHIEF
Professor Nadia Rosenthal

Part of the Nature
Partner Journals series

npj | nature partner
journals

Nature Reviews Neuroscience ISSN 1471-003X EISSN 1471-0048

[About NPG](#)

[Contact NPG](#)

[Accessibility statement](#)

[Help](#)

[Privacy policy](#)

[Use of cookies](#)

[Legal notice](#)

[Terms](#)

[Naturejobs](#)

[Nature Asia](#)

[Nature Education](#)

[RSS web feeds](#)

Search:

© 2015 Macmillan Publishers Limited. All Rights Reserved.

partner of AGORA, HINARI, OARE, INASP, ORCID, CrossRef and
COUNTER