EDITORIAL
667 Stepping Back; Moving Forward
Brooks Hanson
>> Letter by P. H. Gleick et al. p. 689; Policy Forum p. 695

NEWS OF THE WEEK
674 Will Deepwater Horizon Set a New Standard for Catastrophe?
Three Historic Blowouts
676 Peering Over a Cliff at the Poststimulus World
677 Mission to Probe Venus’s Curious Winds and Test Solar Sail for Propulsion
677 From Science’s Online Daily News Site
678 Report Seeks Expansion in a Time of Belt-Tightening
679 Radiation Accident a ‘Wake-Up Call’ for India’s Scientific Community
679 From the Science Policy Blog

NEWS FOCUS
680 NEANDERTAL GENOMICS
Close Encounters of the Prehistoric Kind
Cloned Neandertals Still in the Realm of Sci-Fi
Computer Kid Makes Good
>> Research Article p. 710 and Report p. 723; Science Podcast
685 Unraveling a Riddle in Plain Sight

LETTERS
689 Climate Change and the Integrity of Science
P. H. Gleick et al.
>> Editorial p. 667; Policy Forum p. 695
Shifting the Debate on Geoengineering
C. H. Greene
Response
J. J. Blackstock and J. C. S. Long
690 CORRECTIONS AND CLARIFICATIONS

BOOKS ET AL.
692 What Darwin Got Wrong
J. Fodor and M. Piattelli-Palmarini,
reviewed by D. J. Futuyma
693 The Brain and the Meaning of Life
P. Thagard, reviewed by M. Shermer
694 Browsings

POLICY FORUM
695 Testing Time for Climate Science
S. Jasanoff
>> Editorial p. 667; Letter by
P. H. Gleick et al. p. 689

PERSPECTIVES
697 Tumor Immune Evasion
C. L. Zindl and D. D. Chaplin
>> Report p. 749
698 Cometary Dust in the Laboratory
L. R. Nittler
>> Report p. 742
699 The Impact of Tellurium Supply on Cadmium Telluride Photovoltaics
K. Zweibel
701 Epigenetics and Cognitive Aging
J. D. Sweatt
>> Report p. 753
702 Sewage Treatment with Anammox
B. Kartal et al.

REVIEW
704 Bioluminescence in the Ocean:
Origins of Biological, Chemical, and Ecological Diversity
E. A. Widder

BREVIA
709 Washing Away Postdecisional Dissonance
S. W. S. Lee and N. Schwarz
The act of scrubbing clean one’s hands also removes the tendency to justify prior decisions.
>> Science Podcast

CONTENTS continued >>

Cover
Three Neandertal bone fragments, approximately 40,000 years old, from Vindija Cave, Croatia (shown to scale). DNA extracted from these bones was used to generate a draft sequence of the Neandertal genome, which was then compared to the genomes of five present-day humans. See page 710 and www.sciencemag.org/special/neandertal/
Photo: Christine Verna/Department of Human Evolution, Max Planck Institute for Evolutionary Anthropology

DEPARTMENTS
663 This Week in Science
669 Editors’ Choice
672 Science Staff
673 Random Samples
764 New Products
765 Science Careers
RESEARCH ARTICLE

710 A Draft Sequence of the Neandertal Genome
R. E. Green et al.
Gene flow has occurred from Neandertals to humans of Eurasian descent, but not to Africans.
>> News story p. 680; Report p. 723

REPORTS

723 Targeted Investigation of the Neandertal Genome by Array-Based Sequence Capture
H. A. Burbano et al.
Array capture of Neandertal DNA identifies amino acid substitutions that occurred after the split between humans and Neandertals.
>> News story p. 680; Research Article p. 710

725 Fermi Gamma-Ray Imaging of a Radio Galaxy
The Fermi-LAT Collaboration
Gamma rays from a radio galaxy are relic cosmic microwave background radiation that underwent inverse Compton scattering.

729 The Equation of State of a Low-Temperature Fermi Gas with Tunable Interactions
N. Navon et al.
A Fermi gas is characterized along the crossover regime between its weak and strongly interacting limits.

732 Nanoscale Three-Dimensional Patterning of Molecular Resists by Scanning Probes
D. Pires et al.
A molecular glass can be patterned to dimensions of tens of nanometers with a heated scanning probe tip.

736 Visualizing the Electron Scattering Force in Nanostructures
C. Tao et al.
Effects of particular surface features on electron-induced atomic motion in metal structures are revealed.

740 Viscosity of MgSiO3 Liquid at Earth’s Mantle Conditions: Implications for an Early Magma Ocean
B. B. Karki and L. P. Stixrude
The behavior of the liquid mantle during Earth’s earliest stages was controlled by the viscosity of silicate melts.

742 Extreme Deuterium Excesses in Ultracarbonaceous Micrometeorites from Central Antarctic Snow
J. Duprat et al.
Interplanetary dust particles recovered from Antarctic snow may provide a sample of the early solar system.
>> Perspective p. 698; Science Podcast

745 Cross-Reacting Antibodies Enhance Dengue Virus Infection in Humans
W. Dejnirattisai et al.
Variable maturation of a dengue viral antigen results in incomplete neutralization and promotes secondary pathology.

749 Induction of Lymphoidlike Stroma and Immune Escape by Tumors That Express the Chemokine CCL21
J. D. Shields et al.
An immunotolerant microenvironment driven by chemokine expression contributes to tumor growth and spread.
>> Perspective p. 697

753 Altered Histone Acetylation Is Associated with Age-Dependent Memory Impairment in Mice
S. Peleg et al.
Deregulated histone acetylation may represent an early biomarker of age-dependent cognitive decline.
>> Perspective p. 701

757 Sequential Checkpoints Govern Substrate Selection During Cotranslational Protein Targeting
X. Zhang et al.
Protein cargo is monitored at several points during membrane translocation to improve targeting fidelity.

760 Dynamic Ca2+-Dependent Stimulation of Vesicle Fusion by Membrane-Anchored Synaptotagmin 1
H.-K. Lee et al.
A synaptic vesicle protein must be membrane-anchored to stimulate fusion in vitro at physiological Ca2+ concentrations.

CONTENTS continued >>