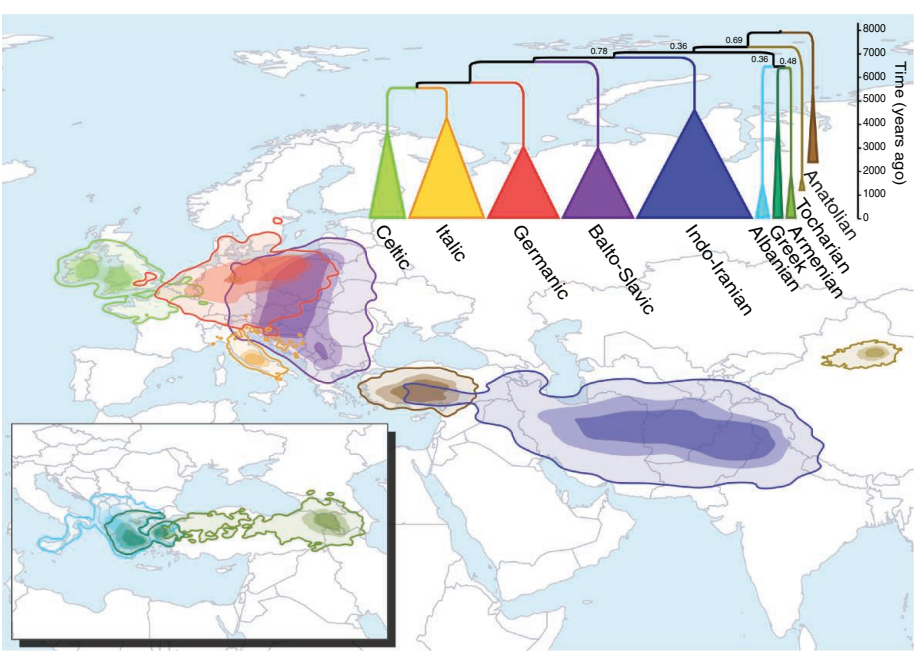
CORRECTIONS AND CLARIFICATIONS

Reports: "Anthropogenic seismicity rates and operational parameters at the Salton Sea geothermal field" by E. E. Brodsky and L. J. Lajoie (2 August, p. 543, published online 11 July 2013). There are two typographical errors in Table 1: The reported phase lag in the time interval of 1982–1991 associated with injection should be 0 instead of 6. Also, the correlation between injection and seismicity in the 1991–2006 time window should be 0.25 instead of 0.26. The HTML and PDF versions online have been corrected.

Reports: "Mapping the origins and expansion of the Indo-European language family" by R. Bouckaert *et al*. (24 August 2012, p. 957). The authors are grateful to William Chang and Andrew Garrett for informing them that there was a problem with the data matrix they used. The error occurred when 13 languages were removed from the original 116-language data matrix (http://ielex.mpi.nl) because they were colonial varieties or doculects, for which the authors had a better source. Removing these languages produced 283 "empty" columns of zeros (out of 6279), which the authors neglected to omit. Columns full of zero entries can potentially bias rate estimates from model-based phylogenetic inference. In addition, this revealed an error in the ascertainment bias correction for all-zero columns in the BEAST code [A. J. Drummond, A. Rambaut, *BMC Evol. Biol.* **7**, 214 (2007)]. The authors have therefore rerun the analyses with corrected data and BEAST code. The covarion model is now the best-fitting model of cognate evolution [C. Tuffley, M. A. Steel, *Math. Biosci.* **147**, 63 (1998); D. Penny *et al*., *J. Mol. Evol.* **53**, 711 (2001)]. Under this model, the basic inference about the geographic origins of Indo-European remains unchanged (revised Table 1 shown below); however, the tree topology differs slightly (revised Fig. 2 shown below) and date estimates are younger, although still showing a better fit with the Anatolian hypothesis than with the Pontic steppe hypothesis (median = 7579 years BP; 95% HPD interval = 5972 to 9351 years BP). The date ranges under the different models of cognate evolution, including the previously best-fitting model (the stochastic-Dollo), are shown in a newly added fig. S13. Revised supplementary material with revised versions of all affected tables and figures, as well as updated xml code, has been posted online. Two points in the main text also need correcting. First, the analysis, in which the authors constrain the tree topology to fit with an alternative pattern of diversification, still shows strong support for an Anatolian origin, but the Bayes factors are slightly different ($BF_{Steppe\ I}$ = 174.02, $BF_{Steppe\ II}$ = 145.35). Second, in the revised analysis, the five major Indo-European subfamilies—Celtic, Germanic, Italic, Balto-Slavic, and Indo-Iranian—all emerged as distinct lineages between 4000 and 7000 years ago, not between 4000 and 6000 years ago as previously stated.

Phylogeographic analysis	Bayes factor	
	Anatolian vs. steppe I	Anatolian vs. steppe II
RRW: All languages	380.4	625.2
RRW: Constrained	174.0	145.4
RRW: Ancient only	828	+∞
RRW: Contemporary only*	73	+∞
Landscape aware: Diffusion	161.10	79.14
Landscape aware: Migration from land into water less likely than from land to land by a factor of 10	63.0	31.2
Landscape aware: Migration from land into water less likely than from land to land by a factor of 100	120.3	59.0
Landscape aware: Sailor	119.4	59.6

*We note that although this analysis appears to show strong support for the Anatolian theory, this is because the Kurgan homeland was never sampled, whereas a small number of samples fell within the Anatolian range. This is perhaps not surprising given the absence of Anatolian and Tocharian languages from this analysis.



Hartmann and Davis were first to publish. They advocated that Earth collided with a sublunar mass object near the end of its formation, based on models of the Earth's assembly. If the Earth's core had formed at the time of the collision, they argued, ejected material would be depleted in iron, thus offering a natural explanation for the Moon's low density. Cameron and Ward's work appeared in early 1976 (*2*). They recognized two additional (and critical) aspects of the problem: First, a mechanism to alter ballistic trajectories (such as vaporization and resulting pressure gradients) would be required to allow ejected material to go into orbit around the Earth. Second, the impact scenario implies a Mars-sized impactor, based on matching the anomalously large angular momentum of the Earth-Moon system.

Given this, most of the Moon origin community attributes the impact theory jointly to both Hartmann and Davis (1975) and Cameron and Ward (1976).

H. JAY MELOSH,[1]* DAVID J. STEVENSON,[2] ROBIN CANUP[3]

[1]EAPS, Purdue University, West Lafayette, IN 47907, USA. [2]Department of Planetary Science, California Institute of Technology, Pasadena, CA 91125–2100, USA. [3]Planetary Science Directorate, Southwest Research Institute Boulder, CO 80302, USA.

*Corresponding author. E-mail: jmelosh@purdue.edu

References

1. W. K. Hartmann, D. R. Davis, *Icarus* **24**, 504 (1975).
2. A. G. W. Cameron, W. R. Ward, *Lunar Planet. Sci. Conf. Abstr*. **7**, 120 (1976).

Social Security and Medicare in the Black

IN HIS NEWS & ANALYSIS STORY, "U.S. SHUTdown ends, but not budget anxiety" (25 October, p. 410), J. Mervis writes, "Hunter Rawlings, president of the…Association of American Universities,…says one major impediment to increased science spending is the continued growth of so-called entitlement programs, such as Social Security and Medicare." Social Security is paid for by a tax dedicated to Social Security. Medicare Parts A and B are also paid for by a tax dedi-

Letters to the Editor

Letters (~300 words) discuss material published in *Science* in the past 3 months or matters of general interest. Letters are not acknowledged upon receipt. Whether published in full or in part, Letters are subject to editing for clarity and space. Letters submitted, published, or posted elsewhere, in print or online, will be disqualified. To submit a Letter, go to www.submit2science.org.

Published by AAAS