does not demonstrate that more neural tissue was recruited as processing complexity increased.

A second problem lies in the assumption made by Just *et al.* that the three sentence types differ solely in the quantitative demands placed on a common set of language comprehension operations. The evidence they cite on this point does not rule out the possibility that the sentence types also differ in the specific cognitive operations (syntactic or otherwise) required for comprehension. Therefore, even if the data did imply differences across sentence conditions in the amount of neural tissue recruited, these differences could reflect differences in processing operations, rather than differences in processing demand.

We do not suggest that the conclusions made by Just *et al.* are necessarily incorrect, but that the evidence they provide is no more consistent with their stated conclusions than with rejected alternative hypotheses.

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Response: By using fMRI to assess brain function during the comprehension of three sentence types of different complexity, we tested and found support for the hypothesis that more demanding language computations engendered more activation in Wernicke's area, Broca's area, and their right hemisphere homologues. "More activation" was operationalized in two ways: (i) a greater volume of tissue becomes activated and (ii) the same tissue becomes activated to a higher level. Rapp and McCloskey suggest that we interpreted the increases only in terms of volume, and imply that we rejected the activation-level interpretation. To the contrary, in support of (ii), we reported a reliable increase in signal intensity in a set of voxels in Broca's area and in its right hemisphere homologue.

The spatial resolution of most contemporary neuroimaging methods is not well suited for distinguishing between these two aspects of quantitative increase, and, more importantly, they need not be mutually exclusive. In sensory systems, increases in stimulus intensity are encoded by both an increase in firing frequency in some neurons and an increase in the number of activated neurons (*1*). Thus, determining the functional relation in various cognitive domains between the amount of computational demand and the amount of brain activity is a fruitful precursor to finer grain studies of the nature of the increases.

As Rapp and McCloskey state, both kinds of increase lead to a measurement of an increase in activation volume with sentence complexity. Thus, ignoring the effect of demand in mapping a functional brain area produces a static and potentially misleading cartography of an inherently dynamic system.

With respect to Rapp and McCloskey's second point, we did not propose that differences in amount of quantitative demand imposed by the three sentence types were the only distinction in how they were processed, but that the quantitative differences in demand would be predictive of the amount of brain activation, which they were.

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References

1. J. H. Martin, in *Principles of Neural Science*, E. R. Kandel, J. H. Schwartz, T. M. Jessell, Eds. (Elsevier, New York, 1991), pp. 329–340.

Corrections and Clarifications

In the response by Timothy Rowe (31 Jan., p. 684) to the technical comment by K. K. Smith *et al.* under the heading "Comparative rates of development in *Monodelphis* and *Didelphis*" (31 Jan., p. 684), the first sentence was incorrect as the result of an editing error. The sentence should have read, "Do *Didelphis* and *Monodelphis* really have differing rates of development?"

In the letter of 25 October by Gustave K. Kohn (p. 481), the URL in reference 1 should have been http://www@nde.lanl.gov/cf/tritweb.htm

Letters to the Editor

Letters may be submitted by e-mail (at science_letters@aaas.org), fax (202-789-4669), or regular mail (*Science*, 1200 New York Avenue, NW, Washington, DC 20005, USA). Letters are not routinely acknowledged. Full addresses, signatures, and daytime phone numbers should be included. Letters should be brief (300 words or less) and may be edited for reasons of clarity or space. They may appear in print and/or on the World Wide Web. Letter writers are not consulted before publication.