

makes it clear that he is no logician), and second, because he's too rabidly ambitious to give one fig about the Conjecture's actual truth or falsity; he cares only whether *he* can prove it with first-order deductive tools.

This bit of niggling doesn't affect the really winceworthy point of their letter, though, which is that language like "implausible and reductive" and "crude and confused" that I used to characterize Petros's reaction to the FIT is indeed "unduly harsh" and somewhat misleading. (Worse, my use of the terms "reductive" and "crude" appears itself to have been reductive/crude, so I can understand why it bothered smart readers.)

Though I am grateful that Comfort and Rothmaler have corrected a misleading description of Petros's reaction to the FIT, I believe that what they've actually done here is catch me out in a writing-and-revision error rather than in a mathematical miscue. (This is the inevitable part of the Response where your reviewer tries to offer some kind of explanation/defense for his snafu, but I'll try to keep it maximally brief.) Note 17, which is where the discussion of Petros's horror about the FIT appeared in my book review, was originally longer than it was in *Science*,

"Petros actually goes to Vienna and looks up poor little agoraphobic Kurt Gödel and grabs him by the lapels..."

and the note included stuff about a scene in Doxiadis's novel right after Petros learns about the FIT and bites his wrist in horror. In this scene, Petros actually goes to Vienna and looks up poor little agoraphobic Kurt Gödel and grabs him by the lapels and pretty much demands that K.G. tell him right there on the spot whether the Goldbach Conjecture is one of the Theorem's improvable propositions, Petros saying stuff in the scene like "Damn theory, man!...I have a right to know whether I'm wasting my life!" (1). It is one of the worst scenes in the book—incongruous, soap-operaish, unintentionally funny—and in retrospect I see now that it's really more the Petros-Gödel exchange that is "implausible...offensive," or maybe rather that I let my strong readerly dislike of that scene color the way I saw Petros's whole reaction to the FIT. The problems here were intensified when the account in note 17 of the Petros-Gödel scene got cut by the editor (2), whereupon harsh language evoked by that scene and (yes, unduly) ap-

plied to the FIT itself lost not only its proper referent but any possible indication of its real (if, yes, confused) motivation.

All that said, I still contend that the overwhelming majority of things in the book I said were silly and/or confused really are silly and/or confused. *Quandoque bonus dormitat Homerus*.

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References and Notes

1. This scene is on pp. 140–142 of Doxiadis's *Uncle Petros & Goldbach's Conjecture* (Bloomsbury USA, New York, 2000).
2. This does not mean that errors/misrepresentations were the editor's fault or just the result of cutting. If the reviewer acquiesces to a cut, he is responsible for cleaning up any errors or incongruities that are created by the cut, and this I clearly failed to do here.

Fundamental Criteria of Nobel Prizes

THE CONTROVERSY CONCERNING WHETHER Oleh Hornykiewicz should have been among those awarded the Nobel Prize for Medicine or Physiology last year, discussed in the News Focus article "Researcher overlooked for 2000 Nobel" by L. Helmuth (26 Jan., p. 567), is not surprising, given that basic science and medicine continue to affect each other's agendas to unprecedented extents. Implicit in the selection process in the past has been the assumption that the Prize be awarded for discoveries of fundamental and generalizable principles that

provide the foundations for the understanding of the pathology of disease. As fundamental science and medicine become inextricably joined, the distinction between generalizable and applied principles becomes less clear—genomics/gene therapy, pharmacogenomics/drug development, and structural biology/proteinomics, to name a few examples. In a strict sense, the Nobel committee was correct and consistent in recognizing the fundamental principles discovered by Arvid Carlsson, Paul Greengard, and Eric Kandel. These discoveries form the cornerstone of our current way of thinking about neurotransmission, processing, learning, and memory.

Carlsson's discovery of dopamine as a neurotransmitter provided the opportunity for others to look at pathological states. Hornykiewicz's pioneering work in understanding the pathology of Parkinson's disease warrants much praise and credit, but was only made possible by Carlsson's observation about dopamine. For the committee to have included Hornykiewicz in the award would have invited the kind of criticism generated by the 2000 selections for the Nobel Prize in Physics, where the committee departed from precedent and awarded the prize for the invention of the integrated circuit, clearly an application of fundamental physical principles.

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CORRECTIONS AND CLARIFICATIONS

REPORTS: "Backward spreading of memory-retrieval signal in the primate temporal cortex" by Y. Naya *et al.* (26 Jan., p. 661). First, in the equation in note 23, the superscript 2's were misplaced. The equation should have read as follows:

$$PRI(t) = [\langle C_p | F(t) \rangle - \langle C_p \rangle \langle F(t) \rangle] / \{ [1 - \langle F(t) \rangle^2] [1 - \langle C_p \rangle^2] \}^{1/2}$$

Also, Fig. 1 (left) printed only partially in color, and in Fig. 2, G and H (right), the two lines within each plot should have been of different thickness. The correct figures are shown here.

