Letters

Of Neologisms and Oxymorons

It is distressing when authors, presented with a perfect opportunity for a neologism, repond with an oxymoron. I refer specifically to the use by D. D. Yager and R. R. Hoy (Reports, 14 Feb., p. 727) of the terms "cyclopean ear" and "auditory cyclops." The Cyclopes were originally the three Titans who forged thunderbolts for Zeus. The roots of the name are from the Greek for circle and eye, and the word has come to refer to anything one-eyed. However, round-eyed ears that resemble slits are not the usual mythological creations. Although one may side with Humpty Dumpty in asserting the question is, "which is to be master"—a simple word such as "monaud" would probably have done quite as well as a noun. "Monaud" also has the advantage of being similar to the already extant adjective "monaural."

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Response: We were interested to read Handel's comments regarding our use of the words "cyclopean" and "cyclops" in describing the single, midline ear of the praying mantis.

We have no argument with Handel over the mythological origins of the terms in question. However, adopting as our authority the *Oxford English Dictionary*, we believe our current usage of "cyclopean" can be taken as simply—and correctly—adjectival. The first definition given there is, "Belonging to or resembling the Cyclopes; monstrous, gigantic, huge; *single*, or large and round, *like the one eye of a cyclops*" (italics ours).

We debated very carefully both the neologistic and oxymoronic opportunities afforded by our discovery. Our primary concern was with the parallel between the mythical, visual cyclops and the very real auditory cyclops you might find in your garden: each is singular in that sense organs normally found as a pair well separated on the body are replaced by one structure in the midline. It should be clear that we intended to tap the epigrammatic potential of the oxymoron in order to focus constructively the reader's attention on a central issue (no pun intended) addressed by our article.

We specifically did *not* want to coin an entirely new word to describe the mantis or its ear. Zeus knows, there are, as it is, more than enough neologisms rendering the scientific literature impenetrable. Handel's proposed "monaud" would be dangerous, indeed. The slip of a typist's finger would covert the mantis from a "monaud" into a "monad," which our dictionary defines as "an elementary unextended spiritual substance from which material properties are derived." While the monad is central to the philosophical discourses of Leibnitz, it is a far cry from the auditory realm.

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Real Costs

Vernon W. Ruttan (Editorial, 21 Feb., p. 781) speaks of the "declines in the real costs of [American agricultural] production. . . . by substituting knowledge for resources. This knowledge, *embodied* in more productive biological, chemical, and mechanical technologies. . ." (italics added). While I have only sympathy for the main point of his argument, the assertion of "declines in the real costs" reflects a peculiar bias built into the discipline of economics.

There can be no doubt that the real costs in land and in labor of a bushel have declined enormously. There can also be no doubt that the monetary costs per bushel, after allowing for inflation, have declined greatly. But here is where two meanings of "real costs" are confused. One meaning—the one that economists would like to be able to measure—is the actual resources used. The other meaning is the statistical approximation to the first, a measure derived by deflating money costs to eliminate the effects of changes in prices. For many purposes this is fine, the best we can do. But it does involve the old index number problem. To deflate statistically one must assign weights and prices to different inputs. The statistical procedures accept either base period or current prices, and either base period or current prices and quantities are used to assign weights. The new knowledge is not substituted directly for other resources, but through its *embodiment*. The real costs of chemicals, mechanical devices, and especially energy have risen a great deal—more are used. The decline in real costs—which must here be a statistical approximation—assumes current or past relationships of the prices of these inputs to the prices of other inputs, and herein lies the peculiar bias. The prices used are our prices and do not necessarily reflect the relative prices that future generations might wish we had used. Furthermore, the statistical estimates of real costs do not account for possible ill effects of the new technologies. What the long-run real costs of any such ill effects may be we cannot say, and so cannot now measure (although environmentalists do attempt to do so). All of which means that we simply do not and cannot know what the real costs of the uses of the new knowledge are.

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Response. The first point that Neale makes deals with the precision of the productivity measurements associated with the "index number problem." Neale is clearly correct in principle on this issue. The sensitivity tests and other tests I have employed in attempts to assess index number bias indicate that the bias, which is inherent in any index number methodology, is not very important.

The second point deals with the spillover effects of agricultural production practices on environmental inputs and amenities. Again, Neale is correct in principle. The impacts are also probably important. The useful next step in the development of our productivity accounts is to attempt to capture these effects more adequately.

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Nutrition Policy Controversies

In his article on diet advice (News & Comment, 7 Feb., p. 537), Eliot Marshall describes quite well the current nutrition policy controversies as perceived by the public through reports in the media. Unfortunately, the article does not come to grips with the underlying issues. These are (i) the difference between established scientific knowledge and belief and speculation and (ii) the difference between the methods by which scientific issues and public policy issues are resolved.

"Classical nutrition" scientists have not failed to support "broad dietary recommendations," nor have they failed to deal with public health problems when the accumulated evidence has provided assurance that both the benefits and the safety of the recommendations could be assured. In addition to their support of public health policies that have led to the virtual elimination of nutritional deficiency diseases, they have supported, against sometimes fierce opposi-