Letters

Kin Recognition

Roger Lewin invariably captures with great success the flavor of a field, and his article on kin recognition (Research News, 9 Mar., p. 1049) is no exception. However, one error crept in at the end which may have puzzled neurologists who have never heard of a region called the intermediate and medial part of the hyperstriatum ventrale (IMHV) in human brains. The IMHV is a region of the bird brain and, as the group led by Gabriel Horn have so elegantly shown, it is involved in imprinting. The striking clinical condition in which patients are unable to recognize faces (prosopagnosia) is thought to involve damage to the temporal lobe. As yet, there is no evidence that the IMHV of the bird brain is homologous to a structure in the human temporal lobe.

On a different point, Lewin suggests that imprinting-like processes are used in kin recognition mechanisms involving "association." I look upon imprinting as the acquisition stage of kin recognition mechanisms involving "phenotype matching" (or stimulus generalization, as it is more commonly called).

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Soviet Science

The briefing "Russian influence in science diminishing" (Constance Holden, News and Comment, 16 Mar., p. 1155) requires elucidation. The reported statistics demonstrate a drop in total Soviet publications and suggest a low current impact of Soviet science on the West, but they are not pertinent to the assertion of a "decline in citations" to Soviet journals. Measuring scientific influence by counting citations to Soviet periodicals is inappropriate, at least in mathematics: American mathematicians frequently cite not an original Russian article but rather the English-language version appearing in a translation journal such as *Soviet Mathematics Doklady*. More telling indicators of the state of health of Soviet science are the decline in exchange visits and the loss by emigration of many first-rate researchers.

The "Lipmann Behrs" mentioned at the end of the briefing is, of course, the distinguished mathematician Lipman Bers, renowned both for his scientific work and for his tireless efforts on behalf of persecuted colleagues in the Soviet Union and around the world. His name correctly spelled can be found on the masthead of *Science*, where he is listed as chairman of the mathematics section of AAAS.

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Holden's recent briefing about the diminishing impact of Soviet science measured by an analyses of citations was interesting. However, it is not very meaningful to compare citations of review journals, such as *Chemical Reviews*, to those of other Soviet journals in chemistry. An analysis (*1*) of chemical research journals presents a similar picture. The most cited research journal in chemistry is the *Journal of the American Chemical Society*, with an average of 5.1 citations per paper. The Soviet journal with the highest number of citations, *Doklady Chemistry*, was number 12, with an average of 0.5 citations per paper. Overall, only one Soviet chemical research journal appeared in the top 25, but four appeared in the top 50.

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Reference

1. J. Emsley, *New Sci.* **93**, 797 (1982).

Phoning Long Distance

In the summary of the article on INTELSAT VI by L. Pollack and H. Weiss (10 Feb., p. 553), we read, "Since the formation of COMSAT 20 years ago, the number of international telephone circuits made through satellites has grown 400 times and the cost of a telephone call has decreased by 12,000 percent." While it is interesting to learn that the number of circuits has grown and grown and grown (400 times), it is even more delightful to discover that one can be paid 119 times the former price of a call if one makes a call now via a satellite!

I hope that, at least in *Science*, the rate of occurrence of such lapses can be made to decrease many times—perhaps by a total decrement approaching 100 percent.

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If the cost of something is reduced by 100 percent, that reduces it to zero. So what does it mean that "the cost of a telephone call has decreased by 12,000 percent"? I have not noticed it in *my* phone bill.

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Referring to cost as having "decreased by 12,000 percent," we took literary license to dramatize the cost reduction in an overseas transmission circuit since communications satellites were introduced into service. This corresponds to a current cost of 1/120 of what it was 20 years ago and should therefore be understood as, in more prosaic terms, a decrease of 99.167 percent. COMSAT's role as an overseas transmission wholesaler is not widely understood. The COMSAT charge to the common carrier, who actually furnishes the end-to-end connection between callers, is only a small part of the charge to the end user.

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Keeping Up

Belonging to the "backwaters" of biology (see S. A. Kolmes, Letters, 20 Jan., p. 238) is not always easy. Admittedly, I do not always keep up on new events at the frontiers of science (amino acid sequencing, the latest on neurotransmitters, new transforming genes, and so forth), but I dutifully thumb through my *Science* every week. It was with some dismay that I found in the 6 April issue that some fish (like electric eels) have been reclassified as invertebrates (Articles, p. 22). I just cannot keep up.

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