We agree that expert testimony should not exceed knowledge or ability, but how can we determine what these abilities and limits might be? Unsubstantiated declarations are no substitute for empirical tests. Fowler and Matarazzo are aware of the current state of knowledge on psychological assessment, as their writings in scientific journals show.

Matarazzo has stated elsewhere that "clinical psychology [much less forensic psychology] is still an art based on some scientific background" (*4*, p. 20) and that "psychological assessment is currently almost exclusively . . . still-to-be-well-validated" (*4*, p. 20). He adds that computerized psychological test interpretations (which may be used as legal evidence) have not met "even the most primitive scientific tests of validation" (*4*). Fowler responds (*5*) that the "clinical report [which summarizes clinical judgments and opinions] . . . has itself rarely been subject to the scrutiny of validation studies. . . . Studies of clinician-generated 'interpretations' have yielded unimpressive results." Matarazzo responds that there is "no evidence" that clinical reports are any more valid than computerized interpretations (*6*). Matarazzo's statements logically imply that neither computerized interpretations or clinical interpretations have met even "primitive" tests of validation.

In their role as spokespersons for the APA, Fowler and Matarazzo imply that their articulated standard for courtroom testimony—that it should not exceed knowledge and ability—does not preclude a substantial role for the psychologist. Their journal statements, however, imply the opposite conclusion; but perhaps this inconsistency is emblematic of forensic psychology—professional interests and scientific data may create incompatible positions. For how can Fowler and Matarazzo's scientific assertions that psychological assessment is "almost exclusively . . . still-to-be-well-validated," has yielded "unimpressive" scientific results, and has not surpassed the most "primitive" tests of validation support their professional assertions that psychologists can aid in legal matters?

DAVID FAUST
Department of Psychiatry and Pediatrics, Rhode Island Hospital, 593 Eddy Street, Providence, RI 02903, and
Department of Psychiatry and Human Behavior, Brown University Program in Medicine, Providence, RI 02903
JAY ZISKIN
Post Office Box 9489, Marina del Rey, CA 90295

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4. J. D. Matarazzo, *Am. Psychol.* **41**, 14 (1986).
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6. J. D. Matarazzo, *ibid.*, p. 96.

IIASA's Credibility

David Dickson, in his article about new financing for the International Institute for Applied Systems Analysis (IIASA) (News & Comment, 15 July, p. 285), notes that IIASA needs to "develop its intellectual credibility." He does not sufficiently explain why. The trouble lies with the very notion of "systems analysis" in the sense adopted from the beginning by IIASA. This notion has little or nothing to do with real physical systems (such as the Chernobyl reactor mentioned by Dickson); it grows instead out of the grandiloquent and now largely discredited studies by Forrester and Meadows on "limits to growth" (*1*) (sometimes parodied as "models of doom").

As carried out by IIASA, this type of "systems analysis" consists of the construction of massive imaginary future "scenarios" with elaborate equations for quantitative "models" which combine to provide predictions or projections (gloomy or otherwise), but which cannot be verified by checking against objective facts. Instead, IIASA studies often proceed by combining in series a number of such unverified models, feeding the output of one such model as input into another equally unverified model. This procedure is illustrated in the IIASA study of world agriculture and in the massive IIASA "global systems analysis" of energy (*2*). Such studies as these are speculations without empirical check and so cannot count as science.

It is indeed the case that IIASA is supported by the Soviet Union. This may result in part from the somewhat naïve Soviet enthusiasm for what is called "cybernetics."

In view of all this, the U.S. support of IIASA has been mistaken from the beginning. At first, this support was provided by the government through the National Academy of Sciences (in the NAS council, I argued against this step). Subsequently, private U.S. support was provided through the American Academy of Arts and Sciences (I again argued in the council of that academy against this step). It is unfortunate that U.S. support for IIASA, to the tune of $450,000, is now to be provided by the National Science Foundation. The current efforts at IIASA may be "state of the art" (as suggested by Dickson), but the "art" in question involves no real element of science.

SAUNDERS MAC LANE
Department of Mathematics, University of Chicago, 5734 University Avenue, Chicago, IL 60637

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1. D. L. Meadows *et al. The Limits to Growth* (Universe, New York, 1972).
2. Energy Systems Program Group, IIASA, *Energy in a Finite World*, W. Hafele, Program Leader (Ballinger, Cambridge, MA, 1981).

BEIR IV Report

A calculational error occurred in the estimates of the risk of lung cancer resulting from radon for smokers and nonsmokers in the recently published BEIR IV report (*1*). The modifying term for age at risk was inadvertently omitted in the program used to prepare table 2-4 in chapter 2 and tables VII-12 through VII-23 in appendix VII. When this term is included, the estimated risks for lifetime exposure decline. For example, the corrected estimate of lifetime risk at one working level month per year is about 20% smaller for smokers and about 25% smaller for nonsmokers. Therefore, the risk to exposed smokers relative to similarly exposed nonsmokers becomes slightly larger, 10.5 vis-à-vis 10.1. The results for males and females in the general population (without regard to smoking status) presented in chapter 2 of the report are not affected by this error.

Corrected tables for smokers and nonsmokers of each sex can be obtained from the Board on Radiation Effects Research at the address below. We thank Fanny K. Ennever of Case-Western Reserve University for bringing this error to our attention.

WILLIAM H. ELLETT
National Research Council, 2101 Constitution Avenue, NW, Washington, DC 20418

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1. *Health Risks of Radon and Other Internally Deposited Alpha Particle Emitters: BEIR IV* (National Academy Press, Washington, DC, 1988).

Erratum: In the Research News article by Richard A. Kerr "In search of elusive little comets" (10 June, p. 1403), the position held by John Craven of the University of Iowa was incorrectly given. He is a senior research physicist.