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Letters

More than meets the eye

"Planning the budget for this year and last" (SN: 2/10/96, p. 86) misses one very important element of this year's science funding picture. We are 4 months into FY 1996, yet many funding agencies (for example, the National Science Foundation, U.S. Geological Survey, National Oceanic and Atmospheric Administration) have made essentially no grants to university scientists.

Many planned field studies and laboratory experiments are being cancelled or postponed, and layoffs of nontenured scientists are on the horizon. Admission to graduate programs is also being affected because of the uncertainty regarding the amount of funds available for research assistantships.

Should this situation continue, very little science will be done in 1996.

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Cover: Scientists use explosive compression in this containment vessel to turn hydrogen, a wispy gas, into a short-lived metal. These experimental results may alter our understanding of Jupiter's core. (Background: NASA; inset: Nellis *et al.*/Lawrence Livermore National Laboratory)

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Science Service, which publishes SCIENCE NEWS, is a nonprofit corporation founded in 1921. It gratefully accepts tax-deductible contributions and bequests to assist its efforts to increase the public understanding of science, with special emphasis on young people. More recently, it has included in its mission increasing scientific literacy among members of underrepresented groups. Through its Youth Programs it administers the International Science and Engineering Fair, the Science Talent Search for the Westinghouse Science Scholarships, and publishes and distributes the *Directory of Student Science Training Programs for Precollege Students*.

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Kasparov vs. the computer

As if it weren't enough that Deep Blue and similar metal monsters can calculate chess positions up to an astounding 200 million moves per second, they cheat! ("Chess champion sinks Deep Blue's figuring," SN: 2/24/96, p. 119.)

While tournament chess players are forbidden to bring chess books to the board, these computers are programmed with thousands of classic chess games and with the latest opening theory. This is like playing Scrabble with the *Oxford English Dictionary* in one hand. Thus, not only did Garry Kasparov find himself dueling against a bolt of lightning, but, quite literally, he was opposing thousands of the best moves of the best chess games played over the past 100 years.

Unlike most games, however, chess is much more than calculation and past experience, it is art and creativity. Kasparov has reaffirmed the magnificence of the human mind.

Gordon W. Gribble
Hanover, N.H.

Dendritic crystals

In "Treelike molecules branch out" (SN: 1/13/96, p. 31), it is stated that "unlike crystals, which grow into ordered lattices, dendrimers accumulate additional material in a repeating, branched pattern." Actually, dendritic crystals are quite common. Moreover, their treelike shape can impart special properties to alloys and other inorganic materials.

These effects can be beneficial or detrimental. An example of the latter is the embrittlement of sterling silver caused by the formation of dendritic crystals of copper oxide when an oxidizing flame is inadvertently used.

On the other hand, the dendritic structure of intermetallic compounds that precipitate out from the melt of certain alloys can strengthen these materials, an effect that is critical to their usefulness. Even relatively pure materials, when solidifying from the liquid state, often crystallize in a dendritic pattern, although this structure is obscured when the interstices fill in later.

J. Richard Guadagno
Paonia, Colo.