tors" is to an image that sociobiology has created for itself. The field in fact has a good deal of internal housekeeping to do in figuring out what has been solidly established, what are current active research questions, what is speculation, and what is just plain nonsense parading as "science." These questions should be dealt with if the concerns of people who fear resurgance of 19th- and 20th-century "scientific" racism are to be dealt with.

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References

1. P. Kitcher, *Vaulting Ambition: Sociobiology and the Quest for Human Nature* (MIT Press, Cambridge, MA, 1985).

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Future Tritium Supply

I hope my editorial of 13 September (p. 1475) and the letters about it (25 Oct., pp. 481–483) will be the beginning of an open discussion of the relative advantages of the options the United States will have in order to ensure a tritium supply for the future.

An analysis by Richard Garwin (*1*) shows the following.

According to the Record of Decision in the *Federal Register* 12/12/95, the accelerator production of tritium (APT) approach would have a discounted total life cycle cost of $5.1 [billion], while the purchase of an existing LWR [light water reactor] would cost $4.1 [billion] (reduced to $1.4 [billion] when one includes revenue to the federal government from the sale of electricity), and to "purchase irradiation services" would be $1.2 [billion] total life cycle cost.

If one assumes that payments for the Russian option would average $40 [million] per year beginning in the year 2003 (presumably some earlier purchases to exercise the contract, compensated by reduction in later purchases), the program cost discounted to 1996 at 4.9% per year would be about $0.57 [billion].

These costs are preliminary, but do show that the cost differentials are significant.

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References

1. R. L. Garwin, personal communication (19 September 1996).

Interpretations of Multiregional Evolution

The question of a unique African origin for modern humans, the "Eve" theory, is discussed by S. A. Tishkoff *et al.* in their article "Global patterns of linkage disequilibrium at the CD4 locus and modern human origins" (8 Mar., p. 1380). Tishkoff *et al.* appear to incorrectly interpret the multiregional model, which seems to influence their conclusions.

Multiregional evolution does not predict "roughly equivalent time depth and genetic diversity in all parts of the world," as Tishkoff *et al.* state. For instance, some regions outside of Africa, such as Europe north of the Pyrenees (*1*), have been inhabited for half the time that others have been inhabited (*2*). The whole linking of time depth and genetic diversity is wrong because the links are *within* a species composed of internally diversified populations; the pattern of genetic diversity among these populations does not reflect differences in time depth, but rather, differing regional histories of selection, genic exchanges, and demographic variation (*3*). Multiregional evolution began with the hypothesis that, as the world outside of Africa was first colonized, a pattern of genetic diversity developed that